

Townes awarded Nobel Prize in Physics



Photo by John Torode

Dr. Charles H. Townes, winner of the Nobel Prize in physics for 1964, is greeted by an enthusiastic crowd of MIT colleagues and well-wishers at Logan Airport as he returns to Boston from California early Saturday morning.

Placement Bureau releases student employment data

A total of 8492 interviews were handled by the Student Placement Bureau during the 1963-64 academic year. Three hundred and thirty-one companies, 34 government agencies and 10 graduate schools conducted the interviews, which involved 830 representatives and 1519 undergraduate and graduate degree candidates.

These and other data on student employment were released to The Tech last week in the Annual Report of the Placement Bureau. This year the detailed breakdown of offered salaries by courses of study is being withheld from general publication to protect the interests of employers and prospective employees. However the overall figures for all courses combined are:

	Low	Med.	High
S.B.	475	625	790
S.M.	525	735	910
Ph.D.	735	1000	1425

These figures represent industrial monthly base salaries and do not necessarily represent acceptance levels.

The placement of all but fifty of the graduating bachelor degree

class of 1964 has been determined by the Office. Fully three-fourths of those accounted for in the class headed for further studies after graduation — 31% at MIT and 44% of the class at other schools. Thirteen percent of the class went directly into industry, and 4% into government work other than military service, which itself claimed two percent of the class.

Course VI S.B. interviews accounted for 31% of all undergraduate interviews; the next largest share went to Course XV prospects, followed by Course II and Course X jobseekers.

Directory available

Graduate students and off-campus residents may obtain copies of the MIT Student Directory today at the Alpha Phi Omega booth in Building 10. After today, the phonebook will be obtainable only in the Information Office, 7-104.

The directory is published each term by the MIT Publications Office. Last Saturday APO delivered the phonebooks to fraternity houses.

By Allan Green
The Nobel Prize—the highest honor bestowed in the world of science—was awarded last week to Dr. Charles Hard Townes, Provost of MIT, for his fundamental work in quantum mechanics leading to the maser-laser principle.

Dr. Townes shared the \$50,000 physics prize with two Russian scientists, A. M. Prokhorov and N. G. Basov, who carried out similar work.

The first MIT faculty member in the school's history to become a Nobel Laureate, Dr. Townes received word of the award last Thursday in Pasadena, where he had gone to attend a NASA advisory committee meeting.

Abruptly awakened

He first heard the news at 4 am when a New York radio station phoned him for confirmation. It was not until the afternoon that the official cablegram from Sweden arrived.

On his return to Boston Saturday morning, Dr. Townes was met by a crowd of well-wishers carrying placards reading "Scientists and Engineers for Townes." Two of his graduate students, Elsa Garmire and Ray Chiao, had installed a new red carpet in his office.

In an interview later that day, Dr. Townes declared, "I'm very much honored. This is the most important recognition a scientist can get; and there's nothing more important except being in the middle of making a scientific discovery."

When asked about the increased obligations of winning the award, he said, "Every Nobel prize win-

ner is the focus of attention, and this naturally puts an added responsibility on him." He added, however, that he did not think his new recognition would affect his work at MIT.

As Provost, Dr. Townes shares with President Julius Stratton, the responsibility for general supervision of the educational and research programs of the Institute. In addition, he carries out research in optical masers.

Mrs. Townes said that all four of their daughters would accompany them to Sweden for the December 10 ceremonies.

She said that the two Russians who shared the prize were personal friends and were "very genial." Dr. Townes added that they were "fine scientists who deserve to be honored too."

Townes was an undergraduate at Furman University, in his home town of Greenville, South Carolina. Graduating summa cum laude at age 19, he completed

work for a master's degree in physics at Duke University. He did his doctoral work at the California Institute of Technology on isotope separation and nuclear spins. (On his recent return from California, Dr. Townes noted that "Caltech President Lee DuBridge had a fine time pointing out my connection with Caltech.")

Maser developed

After working for Bell Telephone Laboratories during the war, Dr. Townes started work on microwave spectroscopy which he foresaw as a new analytical tool for scientific study and as a potential new technique for controlling electromagnetic waves.

He joined the Columbia University faculty in 1948 and continued work in the field of microwave physics. The idea for the maser was conceived three years later during a trip to Washington, D.C. A chief objective of scientists then

(Please turn to page 13)

Glove fight, mystery events scheduled for Field Day

The 1964 Field Day, November 14, will have not one but three mystery events, one of which will involve 100 members each from the freshman and sophomore classes. Also scheduled are three major classical events — a glove fight, a stagecoach race, and tug-of-war.

These revelations, as well as a list of rules, were announced recently by Tom Jones, chairman of the 1964 Field Day Committee of Beaver Key. Jones has directed both previous Field Day efforts of the Class of 1966.

The prevailing class in the glove fight will receive 35 points. The standard 100 yard by 50 yard field will be used; competitors will

not be limited in number. The tug of war consists of two separate events—a coed limited, involving 15 girls from each side (5 points), and a general unlimited (9 points).

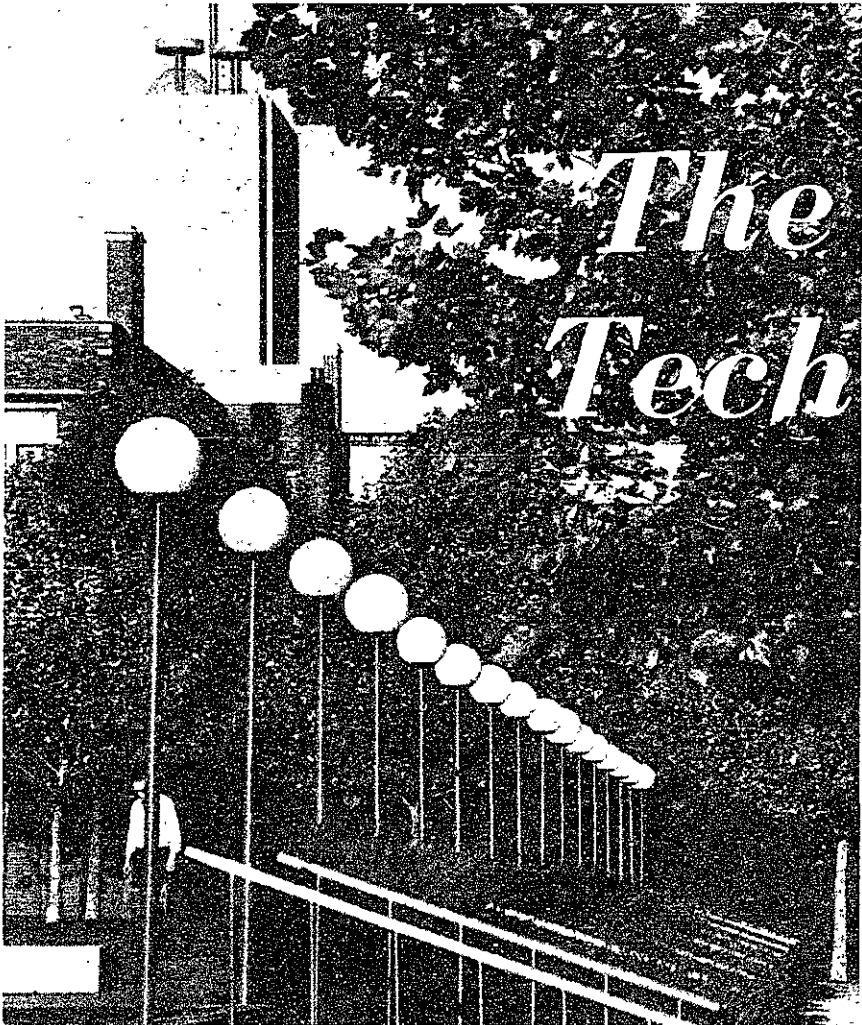
Four teams of ten men each will pull the "lavishly decorated" stagecoach 440 yards. Eight coeds from each class will drive these teams, one serving as driver and a second as "shotgut" for each of the four laps. In addition, the coach will carry two passengers for each lap. According to the published rules, the coaches shall be equipped to "project water at the other class," and also have "an appropriate noise device." Coaches must be able to withhold 1200 pounds of stress under test conditions.

Ten points will be awarded to the winner of the race, an additional 10 points to the team with the best decorated coach, and 5 points will go to the class with the best dressed set of coeds.

As has been customary in recent years, the losing class will be responsible for cleaning Briggs Field immediately following the events.

The second mystery event will involve 25 men from each class and a device described as "a three-foot pole, four inches in diameter, with a flat disk on top which rotates and is capable of holding a 100-pound test force."

The final mystery event (5 points) will involve the freshman and sophomore class officers, and the officers of the Quadrangle Club.



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For synthesizing penicillin

Sheehan receives Scott Award

Dr. John C. Sheehan, professor of organic chemistry, has been presented the John Scott Award for 1964.

The Scott award, presented to "inventors who have benefited mankind," is administered by the City of Philadelphia and consists of a medal, scroll, and \$2,000 premium. Dr. Sheehan received this year's award at the annual National Meeting of the Interscience Conference on Anti-Microbial Agents and Chemistry sponsored by the American Society for Microbiology in New York, October 26.

Mr. G. Curtis Pritchard, Secretary of the Board of Directors of City Trusts of Philadelphia, cited Dr. Sheehan's total synthesis of penicillin and the synthesis of certain analogue of penicillin in presenting the Scott award.

Previous Scott Award winners include Sir Arthur Fleming, who first isolated penicillin, Dr. Jonas Salk, Dr. Glenn Seaborg, Dr. Vannevar Bush, and Dr. Charles Townes, who received the Scott Award in 1963.

Dr. Sheehan joined the MIT faculty in 1946 as an assistant professor of chemistry; he was named associate professor in 1949 and professor of organic chemistry in 1952. He has served as consultant to the President's Scientific Advisory Committee, former chairman and present member of the PSAC Committee on Military Applications of Chemistry and Biology, and a member of the PSAC Limited War Panel.

Flag appears atop Student Center; Original contract fulfilled Friday

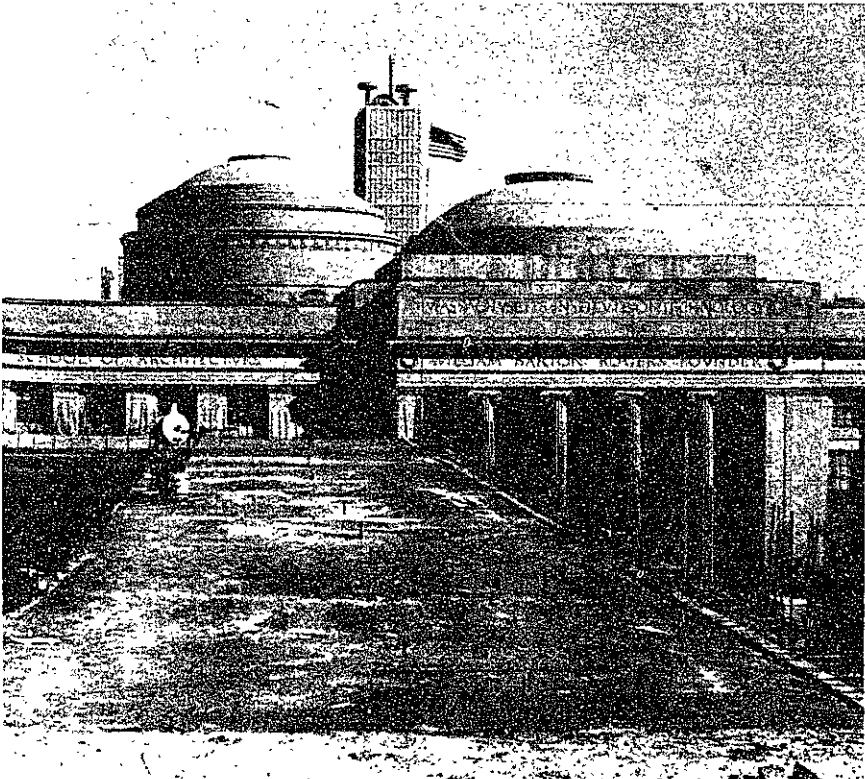


Photo by John Torode

An American flag raised over the fourth floor of the Student Center Friday marked the completion of construction under the terms of the Institute's original contract with W. B. Wexler and Company. Construction will continue until next June on the second awarded contract, which includes the fifth floor parapet and reserve book reading room.

This "topping off" ceremony indicated that the revised building schedule has been met. Work in the coming winter will be concentrated on interior walls of the first three floors and the basement. Construction is being financed by two federal loans and Second Century Fund gifts.

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Nobel award to Townes

Townes and family go to Sweden

By Jeff Trimmer

Just how does one react to the news that you have been awarded the Nobel prize? Professor Charles H. Townes, Provost of MIT, inventor of the maser, and now Nobel-laureate, was awakened at 4:30 a.m. Thursday, October 29, by a local radio station and asked this question. From that time on the phone never stopped ringing, Professor Townes recounts.

The official notification of the award did not reach Townes until that Thursday afternoon when he was finally able to reach his wife and find that she had the official cable. Later that same afternoon the Swedish ambassador called to notify him that he had won the award.

How does one feel? "I, of course, feel very honored," he said. "One cannot be as excited except, perhaps, when one is in the middle of a discovery." He noted also the responsibility of a Nobel winner to society in all remarks or actions he might take.

Plans for the trip to Stockholm are not yet complete. The Royal Society of Sweden makes no arrangements, but as Mrs. Townes noted, "Scandinavian Air Lines expressed great interest in arranging things for us." Townes will take his wife and four daughters with him for the ceremonies.

The oldest daughter, Linda, 21, is a senior at Swarthmore; Ellen, 17, is a freshman at Connecticut College for Women; Carla is 15; and Holly is 12. Dr. Townes hopes to spend more time than the very busy three days of ceremonies in Sweden.

The excitement of winning the award has spread across the continent. In California where Dr. Townes was participating on committee for NASA when the news reached him, other former Nobel winners joined in congratulating him. Townes arrived back in Boston Saturday, October 31, and was met by contingents of his family students and friends with signs proclaiming "Scientists and Engineers for Townes" and "Congratulations Dr. Townes." He even got to kiss the baby of one of the laboratory technicians. "Never felt more like a politician," he remembers.

Also greeting him were hordes of congratulatory telegrams and letters. One, from the American Physical Society, read congratulations to the next President. Another from the two other winners who will share the prize with Townes, Drs. Basov and Prokhorov, congratulated him. Townes and the two Russian physicists are good friends; Basov and Prok-

Honored by associates

horov visited with the Townes' family in 1961.

How about encouraging further Nobel winners? To this, Townes spoke of encouraging the individual scientist in their research. He noted the importance of student work with scientists as research, he feels, is an important part of the teaching process. The importance of adequate equipment and what the Committee on Educational Policy called an academic atmosphere.

Does Dr. Townes expect his statue to appear on the pedestals in Building 7 supposedly reserved for MIT winners? "I wasn't aware of the rumor," he said, "but I suppose those are for people who've died, and I don't expect to be there just yet."

The future for Dr. Townes' work will be divided between administrative work as Provost and some research. He's very interested in the effects of light interacting with acoustic materials. Work on the precise measurement of distance, relativistic effects, and the anisotropy of space are also interesting. The third area with which he is interested is in high-resolution spectroscopy using maser devices. He is not expecting to spend time developing a maser-laser "death ray."

Junior Prom Queen voting begins today; Five finalists to participate at formal dance

Voting for the Junior Prom in Kresge Auditorium Saturday afternoon. Queen begins today at the JP booth in the lobby of Building 10. Tickets for the Saturday night performance of Bo Diddley are available at the JP booth in the lobby of Building 10. The tickets for the Bo Diddley concert are the only ones remaining. All Weekend tickets have been sold.

According to Don Schwanz '66, entries for the contest were submitted Monday and Tuesday. Each fraternity could submit one entry and each dormitory was allowed three entries.

The five finalists chosen by popular vote will be presented at the Friday night formal dance of JP Weekend, November 13-14. The Queen will be selected by members of the JP Committee and the officers of Beaver Key, the junior honorary.

This year the JP Queen will have a bigger role in the entire weekend, according to Schwanz. She will present the Field Day trophy to the winning class Saturday morning. The Queen is also scheduled to make a special entrance at the Four Preps concert

Dorm Council meets

A meeting of the MIT Dormitory Council was held at Baker House on Oct. 29, 1964.

George Jelatis, of Senior House, was elected Dormitory Judcom Chairman. The dorm presidents have met with Executive Committee and have tentatively decided that no changes in dorm representation should be made in the proposed student government reorganization.

Janet Romanowich, president of McCormick, announced that her entire dorm will vote on Housecom's recommendation to apply for admittance to dorm-com.



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ELECTRICAL ENGINEERS PHYSICISTS MATHEMATICIANS

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will be conducting interviews
on campus

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Charities Drive nets over \$1200; Cancer Society principal recipient

John Neyhard '66 and Paul Lindsey '66, co-chairmen of the 1964 Undergraduate Charities Drive, announced Monday that this year's total, to that date, exceeded the funds collected in last year's drive.

As of Monday \$1,273.73 had been collected from the undergraduate student body; approximately \$920 was collected in the 1963 drive.

The dormitories contributed \$769.54 to Monday's total which is a slight rise from last year. The remaining \$502.19 came from

fraternity donors; this is almost four times the amount received from fraternity residents last year. Twenty-two fraternities and all six dormitories had reported by Monday in the 1964 drive. Alpha Phi Omega solicited from the dorm residents, while the Technology Community Association handled the fraternity end of the drive.

Individual donations were made out to the participating charities, which included: the World University Service, the United Fund of Greater Boston, CARE, the American Cancer Society, and Cambridge Settlement Houses. Undesignated donations could also be made. The cancer society was the chief recipient of student donations.

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New program

NASA seeks scientists for space ventures

The National Aeronautics and Space Administration has announced a recruiting program which will seek out 10 to 20 scientist-astronauts. The publication of the criteria for selection and future training plans at this time was partially in response to the recent orbiting of a Russian doctor, the first trained scientist to enter space.

Criteria for the candidates were developed by the Office of Space Science and the National Academy of Sciences. Screening of the candidates will be done by the Academy and members of the Manned Spacecraft Center in Houston.

To be eligible for the program, an applicant must have a scientific, medical or engineering specialty and:

1. Have been born on or after August 1, 1930, be a U.S. citizen, and be no taller than six feet.
2. Have a bachelors or doctorate degree in the natural sciences, medicine or engineering, or equivalent experience.
3. Have transcripts of academic records sent directly to Scientist-Astronaut, Post Office Box 2201, Houston, Texas, 77058.
4. Have Graduate Record Examination scores sent to the same address from the Educational Testing Service in Princeton, N.J. The January 16, 1965 series are required.

5. Submit federal Standard Forms 57, 89, and 78, which involve medical examinations and employment procedures. All are available at the Boston Post Office.

Deadline date for these applications is December 31, 1964.

After preliminary screening, some applicants will be asked to submit additional material including published or unpublished scientific and engineering reports; essays on field experience, research activities, or hobbies related to space missions; and individual thoughts on scientific ob-

jectives for manned missions in space.

Before final selection as astronauts, applicants will receive a thorough physical examination and will take part in a limited space simulation program. The simulation program will familiarize them with the space environment and determine their ability to withstand the stresses of launch, space flight and re-entry.

Selected applicants who are not already qualified pilots will be given individual flight training necessary to qualify them as pilots of high performance aircraft and helicopters.

IFC Presidents' Conference held; Fassett speaks at Endicott affair

"It is important for the fraternity to set itself as a model of urban living for the community," commented Dean of Housing Frederick Fassett at the annual Presidents' Conference.

The gathering of the presidents of all the fraternities took place last Friday night at Endicott House. John Roach, vice president of the IFC acted as chairman for the dinner and discussion meeting.

Dean Fassett spoke at length about neighborhood relations in

general and discussed methods of improving neighborhood contract. He stressed the fraternities' responsibility in the community and suggested that the houses try to maintain better relations through personal contact.

Alan Steinman, Public Relations Chairman for the IFC, reported on his conferences with the president of the Back Bay Neighborhood Association. "MIT's fraternities," he said, "have been thrown together with those of Boston University and Northeastern in a stereotyped picture of college students. The community often overlooks our participation in social services, our blood drives, and our community services."

The Conference also discussed the Independent Residence Development Fund, a loan fund designed to provide money at low interest rates to independent living groups who want to build, or to improve their houses. Dean Fassett commented that "the IRD is magnificent evidence of the faith MIT has in its fraternities."

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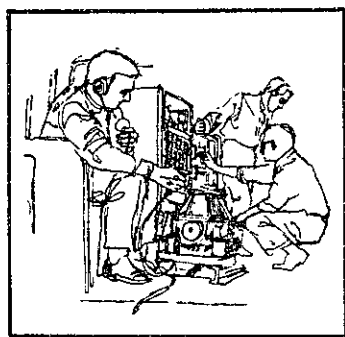
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This effort is so broad... it's hard to find a major space and defense program that doesn't use GPA precision guidance and navigation instrumentation: Apollo, Explorer, Gemini, OSS, Mariner, Polaris, SUBROC, Surveyor, Ranger, and LEM. A complete list would fill this page.

Looking ahead — and the research and development behind it — is our prime business. Visionary programs now in progress will someday yield optical laser gyros and accelerometers, stellar inertial guidance systems, maneuverable re-entry guidance and control systems, strap-down inertial guidance systems, precision microminiature inertial navigation systems, solid state sensors, complex space information systems for spacecraft, missiles, and aircraft.

Down-to-earth expansion programs shore-up these ambitions. A multi-million dollar equipped Research Center in Little Falls, N. J. was completed in 1962. An extensive Systems Engineering Facility was put into operation in late '63. All together the GPA facility represents 1,500,000 square feet of the most advanced equipment complexes in the East devoted to research, development, and production of systems for aerospace.

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CAMPUS INTERVIEWS: Wednesday — Nov. 18

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Finance Board budget is \$53,000 for year

The Finance Board has completed its final review of budgets and requests for the fiscal year 1964-65, and recently announced most of the awards and grants to be made this year.

The largest single item in the final budgets was \$16,682, which will be used by the Institute Committee and its related subcommittees for operation this year. Incomm Operations during the immediate past academic year were budgeted at \$14,252. These figures include two \$1000 grants made towards the expenses of the AWS Symposium on Women in Science and Engineering, one each fiscal year.

The second largest sum was granted to the Technology Community Association, which in addition to \$325 capital expenditure on the publicity center, will use \$14,610 for its operations.

The Combined Musical Clubs received a total of \$12,920, which will be used for travel, publicity, and organizational expenses. Other activities which received regular annual budget grants included WTBS, Beaver Key, the Debate Society, and the Social Service Committee.

Total funds allocated into either direct budget or reserve accounts was \$52,838, a figure very near the total annual grant that the Activities Development Board makes to the Finance Board.

Future work of the Board will be directed towards preparation of a tentative budget request for the next two years to the ADB. Estimates of activities and student government expenses will be complicated by the highly uncertain status of Student Center uses and costs, according to Jim Taylor '65, Chairman of Finance Board.

The Nobel Prize: a proud achievement

The Tech extends its heartiest congratulations to MIT's first Nobel Prize winner, Provost Charles H. Townes. The entire Institute shares in the pride of his accomplishment.

It is interesting to note that Dr. Townes is assisted in his work by both graduate and undergraduate students, who are thus given an opportunity to have an intimate part in the vital research which is the mainstay of the Institute's preeminent position. This opportunity for involvement with men of Dr. Townes' calibre characterizes MIT's academic atmosphere.

At MIT involvement is a key word—involvement in classes, in research, in industrial and government work, and in administration. As Dr. Townes pointed

out in an interview yesterday, it is the Institute's responsibility to society to become involved. This responsibility can and should include students as well as faculty.

A vital part of MIT's education is this opportunity for involvement. Any student who merely attends classes and turns in assignments can pass his courses; but he has missed the opportunity for creative development by association. Unfortunately some students seem ignorant of the resources which lie within their reach.

As the CEP Faculty Survey indicates, and as Dr. Townes has demonstrated, there is considerable interest in the undergraduate; but first the student must show interest. It is MIT's pride not only that a member of its faculty won the Nobel Prize, but also that it has offered to the student involvement with men of this rank. For this reason the undergraduates can sincerely say that they share in the pride of Dr. Townes' achievement.



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Unsigned editorials in The Tech are the opinion of The Tech's Board of Directors, not that of MIT. The Tech welcomes letters from its readers. Space permitting, such letters will be printed in whole or in part, if deemed by the editor to be of sufficient interest or benefit to the community. Brevity increases the chance of publication. Anonymous letters will not be printed, but names will be withheld upon request.

Appointment

The Board of Directors of The Tech has accepted with regret the resignation of William Judnick, '65, as News Editor, and is pleased to announce the election of William Byrn, '66, of Phi Beta Epsilon and Newport News, Virginia, as News Editor.

CEP: faculty morale

The Faculty Survey of the Committee on Educational Policy released last week contained some interesting sidelights on the morale of the faculty. It reveals generally a vote of approval for the MIT environment, but there are also some significant complaints.

On the positive side, about half the faculty said they would "very much" like to spend the rest of their careers here; another 35 per cent said they would "pretty much" like to. Over one third of the engineers and one fifth of the humanities department rated their department or field best in the country. Another half rated it among the few best. But among the scientists, only 12 per cent thought their department best in the country (another three fifths thought it among the best).

This difference in the attitude of scientists also extended to their criticisms; while the engineers complained most about pressure, the scientists decried the lack of an academic atmosphere, size and location of the Institute, and non-academic chores. Their chief approval went to the facilities available.

It is hard to tell how much believing a department is best helps contribute to making it the best: it is natural at this point to speculate what effect the added status of a Nobel Prize winner will have on the scientists at MIT.

Doomsdayprediction

Years ago it was the tradition for the track coach, affectionately called "Oscar" in the headlines, to predict the winning class on Field Day. Alas, Mr. Hedlund is no more, and his successors, being more prudent in light of the current trends, are silent. Dutifully we will leap into the breach.

Obviously the freshmen will win. This is not due to any sterling talent on their part; but the match has been conceded. The sophomores, instead of eagerly anticipating the fray, are drooping their jaws to the ground, morbidly reflecting on their fate at the hands of vastly superior numbers of frosh. Such thoughts naturally tend to discourage attendance by the more wavering souls.

Regardless of our prediction, however, we shall still send reporters to the scene of the carnage. Even in Coach Hedlund's time, classes were known to rise up and prove him wrong.

Campus Topics

Summer work abroad goal of subcommittee

By Patrick Winston

Last summer the Inscomm Foreign Opportunities Subcommittee, which I now chair, found technical and business jobs abroad for an experimental group of twenty students, both graduate and undergraduate. From Sweden to Turkey participants were placed with excellent results. All since contacted found their jobs technically instructive and the experience tough to match.

Meeting Thursday

The good feedback allows expansion of the program this year. Students with the technical ability and drive to make a good impression abroad are urged to apply. More details about the program and application procedure will be the subjects of a meeting this Thursday, November 5, at 7:30 in the Library Lounge, 14N-310.

The Foreign Opportunities Committee started work in the summer abroad area in the fall of '63 believing that such work would give students a taste of foreign life without forcing them to forfeit a summer's technical experience. The cash factor enters too; the work idea probably minimizes the costs involved. In a sense,

the program also substitutes for junior year abroad plans used at other schools. The F.O.C. and the foreign study advisor, Professor Norton, are working hard on developing acceptable study year programs, but it is clear that such programs will be individually planned and restricted to a few specially qualified students.

Language Problems

The language problem is far more acute in studying. Years of training are generally required. For a summer's work, however, most get away with a minimal amount of language background. Students returning from Sweden and Denmark report that English sufficed nicely since their bosses and friends spoke astonishingly good English. A bit of study pays off, though; it increases the enjoyment of foreign living considerably, and it leaves the people with a far better impression of the USA.

Of course, working and studying are not the only ways to gain a valuable foreign experience. Crossroads Africa, the World University Service, and the American Friends Society all sponsor excellent goodwill work camp programs.

Letters to The Tech

To the Editor:

Shortly after ten o'clock this morning, I was treated to a show of one of the sorriest events of this entire bitter and sordid campaign.

At the time, I was in the lobby of building ten passing out literature in support of the protest ticket of Walter Cronkite and David Brinkley in the straw vote. All campaigners present were behaving in an orderly manner, when I was told by Mr. William Samuels, UAP, that not only was I being forbidden to campaign for the candidate of my choice, but that my campaign materials themselves were being confiscated, almost as if they were something subversive. When I asked why this was occurring, I was told that

my candidates were "not on the rolls" in any state, unlike the others. After the Lodge-Hatfield ticket was mentioned, some mumbling was done to the effect that the Lodge people had gone through him, this apparently giving them some sort of benediction and abolition.

After retreating to the position that the other campaigns had all "discussed the issues," I asked him whether he had been so wrapped up in the bureaucratic trivia of his office that we had failed to notice the numerous Cronkite-Brinkley posters around the Institute, not to mention mailbox stuffing at all dormitories per-

(Please turn to page 5)

Kibitzer

By Tom Neal

North			
♠ K Q 10 4			
♥ A 10			
♦ A 9 7 4 2			
♣ J 5			
West		East	
♠ J 7 6 2		♠ 9 5	
♥ 9		♥ K 8 7 6 5 2	
♦ K 10 6 5		♦ J 8	
♣ K 9 3 2		♣ Q 7 6	
South			
♠ A 8 3			
♥ Q J 4 3			
♦ Q 3			
♣ A 10 8 4			
West	North	East	South
pass	1♦	pass	2NT
pass	3NT	pass	pass

North-South vulnerable; West dealer.

Opening lead: 2 of clubs.

This hand is an outstanding example of declarer having a wide variety of play possibilities. He groped his way successfully through the maze and ended up with a profitable score.

After a fairly standard bidding sequence, West's two of club opening was covered by the five, queen, and South's ace. South counted one more club trick, three hearts, three spades, and one diamond. Having decided to play for overtricks, he led a heart to North's ten to unblock his own hearts. East's king won and a heart was returned, West discarding a club. South now had considerable information. East's six card heart suit and West's probable four card club suit left West with at least four cards in one if not both of the other two suits. Clubs and spades looked brighter than diamonds. The jack of club lead was taken by West's king. The nine was returned as the best of many poor leads but giving South two clubs. South made them good and cashed the queen of hearts to squeeze, discarding dummy's diamonds and West discarding two diamonds. South noticed West's reluctance to discard spades and led the jack of hearts. This was too much for West and he sluffed the two of spades to protect his king. Two spade leads, ending up in the hand of be safe, established the spades and the rest of the tricks. South's careful playing netted him two overtricks.

Note: All hands appearing in this column have actually been played at some time. In the advancement of better bridge, I will gladly accept interesting hands. Call at 247-8691, or x3206.



Debaters win in BU tournament; Freshmen place 7th at Dartmouth

The MIT Varsity Debate team received top honors in the four-man team division of the Boston U. Invitational Tournament last week. At the same time four MIT freshmen representing the Debate Society finished seventh out of 21 participating schools in the Dartmouth Fall Novice Tournament.

The collegiate debating topic for this academic year concerns the advisability of a Federal public works program to aid the American unemployed. MIT debaters Bender and Stock (affirmative) and Johnson and Hello (negative) finished with a record of ten wins and six losses in the four-man BU competition.

On November 13 and 14 the Debate Society will hold its annual MIT Invitational Tournament. Approximately 25 teams from 16 schools in the New England area are expected to participate.

Interested students are invited to the final rounds of the tournament, which will be held at 4:30 Saturday in the Little Theatre of Kresge.

The Harvard Outing Club presents

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Theory of smell proposed

An explanation of the process by which smell is transmitted by the olfactory nerve in the presence of an odor has been proposed by two MIT professors. Drs. Robert Gesteland and Jerome Lettvin believe that the transmitting electrical signals in each nerve fiber depend on two different receptor mechanisms.

One increases the rate of impulse-firing, and the other depresses that rate. The electrical action of both mechanisms are somewhat different and are not linearly related.

Olfactory nerve fibers have their endings in the mucosa, or surface of the lining of the nose. Here they come in contact with molecules of odor-producing substances which produce a stimulus at special receptor sites.

Using frogs as experimental subjects, the two men recorded both the activity of single fibers and the average electrical activity of the frog olfactory mucosa before, during and after stimulation. The result of these measurements seem to indicate that the odorant molecules apparently alter temporarily the permeability of the

nerve membranes at the receptor sites.

Drs. Gesteland and Lettvin showed that there were at least two processes of permeability and resulting electrical current flow involved in the receptor mechanisms. They also found that the electrical pictures of the actions of large groups of aggregates of receptors could not be explained by a linearly-related unitary process common to both mechanisms.

Armenians give \$200 for suitable frosh

The Hai Guin Club of Boston has announced the offering of a \$200 scholarship to be awarded to an Armenian-American student born and residing in Massachusetts and currently attending college.

The funds will go towards the second term tuition of a freshman. Applications must be completed by December 1, 1964; the award will be based upon need and scholastic ability.

Interested students should contact the Student Aid Center for further information.

Letters:

(Continued from Page 4)

mitting it and the handing out of literature at that very moment.

When he finished hemming and hawing about agreeing with our right to protest, he finally managed to get out his real "accusation." He "accused" us of the hideous crime of possibly appealing to some people who might vote for Cronkite as a hack, a joke.

It was this charge that really scared me. The right to laugh at our candidates and our elections has long been an American tradition. But Mr. Samuels did not even go through the gestures of attempting to reconcile his action with that tradition. He assumed that the only issue was whether we would attract hack, or joke, votes. That to attract such votes would be an offense was left as an unspoken assumption. Since this charge was too serious to discuss in such a casual manner, I withdrew to the accompaniment of murmurs about "creating a bad impression."

Although I voted for Cronkite and Brinkley as a protest against all of the candidates, major and minor, laughing at the entire election is certainly the right of every American. Regretting that politics should ever come to such a pass.

Erwin S. Strauss, '65

Student Directory

To the Editor:

Have you looked at the new Student Directory? Tried to contact anyone? If so, the odds are high you share my frustration and annoyance. In keeping with previous standards, the MIT Publications Office has produced an amazingly shoddy attempt at a simple list of student addresses & telephone numbers. If you're not familiar with recent years' editions of the Directory, you might come to the innocuous conclusion that this is just one of those occasional mishaps that befall any publisher. But those of us who have been here longer know that the consistent and total failure of MIT to publish a reasonable student directory proves beyond a doubt that the Institute is utterly incapable of performing the task. And let us not minimize the error: forty-one of the forty-six students on my floor were incorrectly represented in the Directory! And we know who it is that pays for this publication, don't we?

I think it is clear that the time has come to relieve the Publications Office of their insupportable burden. I for one would be glad to pay 25c for a reasonably accurate Student Directory. Alpha Phi Omega used to handle the job quite well, four years ago. Why don't they or some similar responsible student group assume the job now, and the profits?

The whole student body would be indebted.

Robert S. Zucker, '66

Courtesy in lecture

To the Editor:

MIT students are reputedly supposed to be a mature group. It seems to me, then, that our class has a bit of catching up to do.

This is evident in the disappointing lack of courtesy, respect, and interest exhibited during our lecture periods. Wasn't one of the reasons for coming to MIT the tremendous opportunity for studying under the best faculty in the country? How then can we be so foolish as to drive a very enjoyable and interesting lecturer from the room in disgust? I believe that Professor Mattuck deserves a sincere apology from us, and I hope that we wise up in the future. It would be a shame to see the potential greatness of our class handicapped with a bad reputation.

Bill Klein, '66

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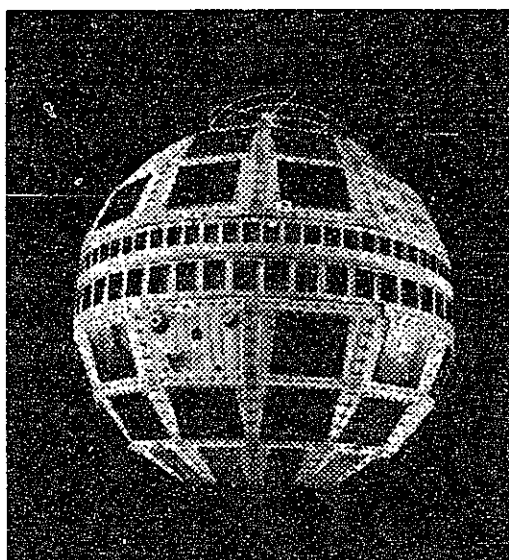
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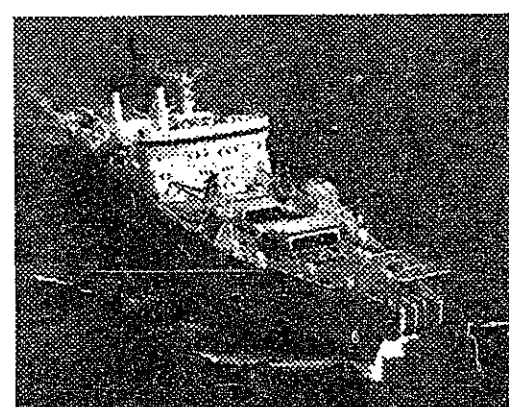


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Project Transport to study high-speed transportation for Northeast Corridor

By Bob Horvitz

Project Transport! HSGT!

These two terms should come into common usage here in the very near future as MIT, at the request of the Department of Commerce, is undertaking a comprehensive study of the technological potential for high speed transportation in the Northeast Corridor.

Project Transport's, as this study is called, participants include a number of the nation's foremost experts in the field of transportation technology drawn on a broad basis from several Schools and Departments of the Institute, including Civil Engineering, Mechanical Engineering, Electrical Engineering, Aeronautics, Political Science and City Planning.

"The Project," explained Prof. Robert J. Hansen, the Project Director, "is concerned with the evolution of an entirely new system to transport people at high speed from door to door in the region between Boston, Mass. and Washington, D.C., through 1980."

Project Transport is an attempt to identify research areas in which progress could advance transportation technology, and this will necessitate detailed exploration of various alternatives.

High speed ground transportation (HSGT) systems are being analyzed first. Two different methods are possible to perfect HSGT. First of all, present day modes of transportation could be upgraded. Secondly, there is the possibility of new types of HSGT, which may go far beyond any present day modes. Objectives, system requirements, range of possibilities, technological research requirements, methods of achieving such a system, and related issues and factors are some of the initial questions being analyzed by the staff of Project Transport.

Any transportation system has certain basic objectives:

- 1) Geographic Mobility — Door to door transport: As the diffusion of the population and industry in the Corridor increases, it will no longer be possible to think of transportation between centers of large metropolitan areas. Ideally, in other words, good transportation should be suitable from door to door, where the doors are randomly located.
- 2) Minimum time door to door — Speed is of the utmost importance. Slower systems always yield to more rapid modes of passenger transportation.
- 3) Safety, comfort and conven-

ience— These factors will also affect public choice between transportation modes. Safety, particularly, is an important consideration.

4) Cost of transport— Although low cost is a significant objective, the issue is not one of minimum cost but of acceptable cost, and the specific goal should be to design transportation services whose cost is acceptable in view of the services offered and the problems solved.

5) Social, political, and economic considerations— A new transportation system should not generate side effects and after effects which contradict or contravene any stated social, political, or economic goals of the community, either local or national.

One possibility of improving transportation would be to upgrade one of the present day modes, i.e., highways, rail, or air. Highways should continue to satisfy a significant percentage of the transportation needs through 1980; however, when closely spaced end points of a journey lie in areas of high population density, automobile travel becomes much less efficient.

In railway transportation, both speed and accessibility are problems. To compete on a door-to-door time basis with airplanes, train speeds of around 200 mph are necessary. Also, although the present track layout gives accessibility to the major metropolitan centers and at some smaller ones along the right of way, poor access to new off-track areas will develop by 1980.

In both rail and air transportation, the time required to stop and start necessitates exceedingly high actual speeds to average overall the same times as an automobile. In addition, there are not enough airports, and as they develop, problems of safety and capacity of airlines and airports will result.

Thus it seems there is a need for an additional mode, possibly some new type of high speed ground transportation meeting the requirements of speed, accessibility, comfort, cost, frequency, and safety, while being readily adaptable to alterations necessitated by increases or shifts in population, or changes in travel habits.

(Please turn to page 11)

Anti-Goldwaterites amass on Memorial Drive; March travels across bridge to Commons

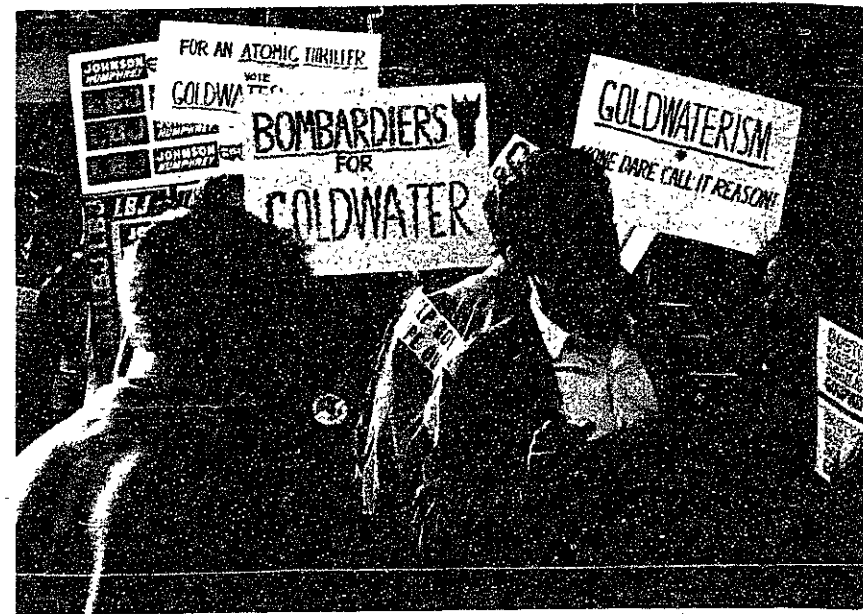


Photo by Steve Silverstein

A "Boston March Against Goldwater," organized by these Harvard students, was held last Friday on the Boston Common. These students from MIT, Harvard, Tufts, and Brandeis gathered at the intersection of Mass. Ave. and Memorial Drive, one of three rallying places, before the march. Sponsoring MIT groups included the Scientists and Engineers for Johnson and the MIT Young Democrats. William Hodes, a Harvard junior, stated the purpose of the march was "to urge voters to go to the polls not only to defeat Goldwater as a candidate, but to crush completely the reactionary forces which have captured the Republican Party."

Good reading



You're looking at the intelligent product of one week's work. (Some might be in your campus library.) They're technical bulletins written by some very talented scientists and engineers at the Jet Propulsion Laboratory. JPL people write over 500 such documents each year. Documents with titles like "Evaporation Effects on Materials in Space," and "Simple Guidance for Deep-Space Booster Vehicles." Pretty heady stuff.

But then designing spacecraft to reach the Moon and

planets is a pretty head-y assignment. And it takes a lot of bright people to make it happen. Where do these bright people come from? Better colleges and universities around the country. Yours, for example. Why not sign up for an interview with a JPL man? Besides working at the most fascinating job in the world, you'll also have lots of good books to read.

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Wulff gets award for good teaching

Professor John Wulff, who holds the Class of 1922 endowed Professorship of Metallurgy, was recently chosen for the 1965 Albert Easton White Distinguished Teacher Award by the American Society of Metals.

Professor Wulff currently directs 3.14, Engineering Materials.

Course VI professor visits Soviet Union under a new arrangement between countries

A Course VI professor, acting under an arrangement established by the Soviet Academy of Sciences and the US National Academy of Sciences, is spending this Fall in a professional visit to the Soviet Union.

Alan H. Barrett, whose own work includes research on the design of the Mariner II investigation of the temperature of Venus,

planned visits to the Lebedev Physical Institute in Moscow, and observatories in Leningrad, Abastuman, and Byurakan.

Professor Barrett is expected to return to the US in late November or early December. He proceeded to the U.S.S.R. following the meeting of the International Astronomical Union in Hamburg, Germany this summer.

A second interest of Dr. Barrett's concerns detection by radio methods of the OH radical in space; he hopes to relate this work, now being done at Lincoln Laboratories, with Soviet astronomers' efforts.

MIT library system begins replacement of Dewey numbering

The MIT library system has begun a gradual program of change towards the Library of Congress system of classification. The current system in use is the Dewey decimal system — largely numerical. The new system, which is being used in the classification of all new books received uses both alphabetical and numerical characters; it is considered to have greater flexibility.

Implementation of the change began last year in the Science, General Humanities, and Reserve Book libraries; full use of the system is not expected for a few years.

Sample classifications include A—General Works, B—Philosophy and Religion, C—History, J—K—Political Science, L—Education, M—Music, N—Fine Arts, P—Language, Q—Science, R—Medicine, T—Technology, U—V—Military Science, and Z—Bibliography.

Will the ghost return?

Hanging haunts Senior House



Hallowe'en is celebrated at Senior House party as crowded dorm conditions are relieved by reveling residents. Meanwhile, back at the great dome, figures resembling freshmen were seen fastening a weird design.

Photo by Ed Eisenman

Dr. Mrak speaks at dinner honoring food science work

Dr. Emil Marcel Mrak, Chancellor of the University of California at Davis, spoke at the second annual Underwood-Prescott Memorial Lecture, which honored him for his contributions to the advancement of food science.

Dr. Mrak explored the possibility of developing more efficient food industries. He discussed recent experiments on the exercise of pigs, where the object was to decrease the fat content of the ham to some extent.

He also speculated on the future of milk. The geneticist, he hoped, will "reverse the picture with respect to concentration of fat in milk and eventually develop a new strain of dairy cattle that will produce milk rich in protein and low in fat."

The population explosion will play an important part in the future of food technology, Dr. Mrak noted. The middle man (the animal processor) may be necessarily eliminated and the farmers induced to produce alfalfa or other plants high in protein so that they may be made directly into protein products by plant processors. Perhaps, he explained, in less than a century, animals may be inadequate meat producers, making it necessary to take the protein and other elements animals now provide humans directly from the land for fabricating into synthetic foods.

Dr. Mrak also discussed the possibility of using genetics to improve the quality of food and at the same time make mechanization of the growing process possible. By producing — say tomatoes, high in solids, flavor and color, and improving the rigidity of the stems, new tomatoes would stand the abuse mechanization would impose upon them.

The food processor and the farmer have a closer relationship today than ever before, according to Dr. Mrak. This relationship must become ever closer, he explained, because the processor is confronted with farming problems more and more.

The Underwood-Prescott Memorial Lectureship was established in March, 1963, by the William Underwood Company to honor the scientist selected annually by MIT for his contributions to the advancement of food science. The MIT selection committee said Dr. Mrak was the first food scientist to recognize the advantages of coordinating into one body of knowledge what had been separate approaches to the agricultural sciences on one hand, and to the principles of food canning on the other.

The evening's program included introductory remarks by Dr. Samuel A. Godblith, Professor of Food Science at MIT; George C. Seybolt, President of William Underwood Company, and Dr. Jerome B. Wiesner, Dean of Science at MIT.

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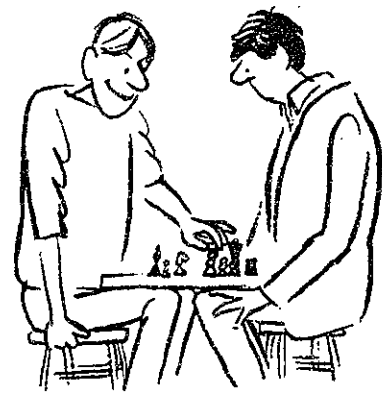
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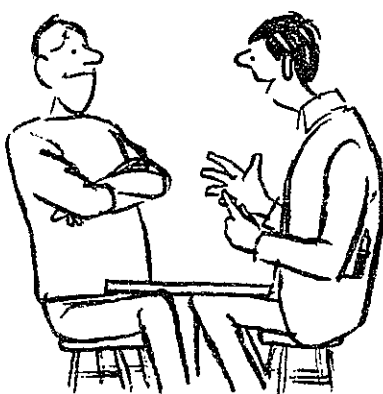
2. Let's act it out. I'll be the boss. Try and sell me.

Okay.



3. "Good morning, Mr. Fishwick."

"Hi there, Freddie boy, buddy, old pal."



4. "Just give me the facts."

"Well, sir, I took Quine's course in mathematical logic, got a B in Wittgenstein's linguistic analysis, and I'm a bug on 16th-century Flemish painting."



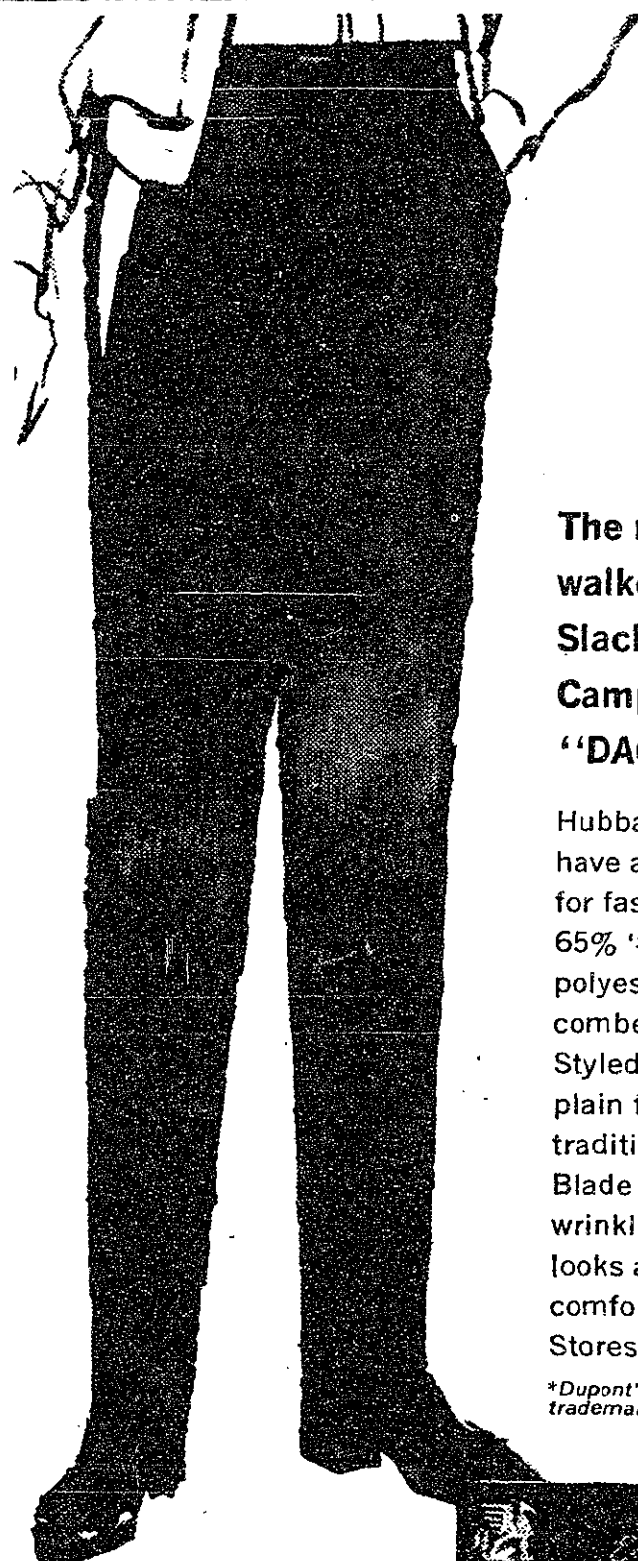
5. "You seem well rounded. What's your major?"

"Musicology, cum laude. But I'm getting my M.A. in experimental psych."



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Movie Schedule

ASTOR — 'Lilith,' 9:30, 11:30, 1:30, 3:30, 5:30, 7:30, 9:30.

BEACON HILL — 'Topkapi,' no time available.

BOSTON CINERAMA — 'Mediterranean Holidays,' evenings 8:00, matinees Wed., 2:00 Sat. and Sun. 2:00 and 5:00.

BRATTLE — Ben Jonson's 'Volpone' through Saturday. Starting Sunday: First Boston showings of Harold Pinter's 'The Guest,' adapted from his play 'The Caretaker.' Shows daily 5:30, 7:30, 9:30, matinees Sat. and Sun. at 3:30.

OAPRI — 'One Potato, Two Potato,' 10:45, 12:35, 2:25, 4:15, 6:05, 7:55, 9:45, Sun., 1:45, 3:35, 5:25, 7:15, 9:05.

COOLIDGE CORNER — 'The Pink Panther,' 3:00, 9:35, Sat., 5:55, 9:55, Sun., 1:30, 5:40, 9:35; 'From Russia with Love,' 1:00, 7:30, Sat. 4:00, 7:50, Sun., 3:25, 7:30.

EXETER — 'Murder Ahoy,' 2:00, 3:45, 5:35, 7:20, 9:10.

GARY — 'Mary Poppins,' 9:00, 11:30, 2:00, 4:30, 7:30, 9:30.

HARVARD SQUARE — 'Becket' plus short subject 'The Astronauts'; complete shows 2:00, 5:05, 8:10 (through Monday); Tuesday: Review Day.

KEITH MEMORIAL — 'Send Me No Flowers,' 11:25, 2:50, 6:10, 9:40; 'Blood on the Arrow,' 9:40, 1:00, 4:25, 7:50.

LOEW'S ORPHEUM — 'Rio Conchos,' 9:45, 11:40, 1:40, 3:40, 5:40, 7:40, 9:45.

MUSIC HALL — 'Where Love Has Gone,' no time available.

PARAMOUNT — 'Joy House,' 11:25, 2:45, 6:10, 9:30.

PARK SQUARE CINEMA — 'Seduced and Abandoned,' 1:30, 3:35, 5:40, 7:45, 9:55.

PARIS CINEMA — 'Lili,' 2:00, 4:00, 6:00, 8:00, 10:00.

SAXON — 'My Fair Lady,' evenings 8:30, matinees Wed., Sat., and Sun., 2:00.

UPTOWN — 'A House Is Not a Home,' 11:00, 2:35, 6:05, 9:45, Sun., 2:40, 6:15, 9:45; 'Divorce Italian Style,' 12:50, 4:15, 7:55, Sun., 1:00, 4:25, 7:55.

WEST END CINEMA — 'The Empty Canvas,' 11:35, 1:35, 3:30, 5:25, 7:20, 9:15.

Theatres

HOTEL BOSTONIAN PLAYHOUSE — 'Caligula,' opening Nov. 5, week days 8:30, Sat. 6:30, 9:45, Sun., 5:00, 8:30.

COLONIAL — 'Poor Richard,' starting Nov. 9, 8:30, matinees Thurs. 2:15, Sat., 2:30.

SHUBERT — 'She Stoops to Conquer,' Nov. 10, 8:30.

WILBUR — 'P.S. I Love You,' evenings 8:30, matinees Wed., Sat., 2:30.

music . . .

Band concert proves best in years

By David Vanderwerf
Showing balance and precision, the Concert Band presented an excellent concert in Kresge Auditorium last Friday night.

For several years, the band has been unable to bring all sections to full strength. This has meant that the musicians in short sections have had to strain to make up the difference in sound, and this has adversely affected the total sound of the group.

This year the band seems to have the problem solved. Not only is the numerical balance greatly improved (for example, they now have a full complement of saxophones), but the balance in sound even in soft passages (usually the most obviously bad spots) was very good overall. The smooth flow of dynamics, of precise attacks, and of controlled sound as a whole indicated that this was a group controlled by the director, not a number of individuals following the same beat.

The final point of balance was in the program. The band this year seems to have shifted to a somewhat lighter repertoire, a move many members had favored. The music, while still difficult and varied, is weighted toward music the band can play with enthusiasm, and that the band did.

Opening the concert was Felix Mendelssohn 'Overture Fier Harmoniemusik, Opus 24.' The production is heavy and dark, but



Photo by Phillip Dowds
John Corley, director of the Concert Band, cues in the bassoons in last Friday's concert in Kresge Auditorium. The band played works by Mendelssohn, Giannini, Schuman, Miller, Dello Joio, and Gould.

leads into a light, cheerful, flowing theme which makes up the main body and conclusion. The band was perhaps at its worst on this number, but still turned in a good rendition.

The second number, Vittorio Giannini's 'Fantasia for Band,' is a sharp contrast to his third symphony, which the band performed here two years ago. The third symphony is light and flowing. This work is discordant and heavy. Development of the theme is almost 'jazzy.'

This was the only time when the band's balance left something to be desired. The first part of the fantasia was written as a discordant, uneven section, but not to the extent it was played. While the band could handle normal balance well, a deliberate imbalance appeared to be more than they could control.

The final selection before intermission was William Schuman's 'George Washington Bridge.' Schuman has created a vivid picture with this work. Even for one who has never seen the particular bridge, the music conjured up visions of bridges in general.

The band was balanced and in tune throughout. Where sharpness and precision were needed, they responded. Where a more impressionistic sound was needed, it was unmarred by individual sharpness.

Leading off the second half of the program was Edward Miller's 'Three Pieces for Band.' The band played this short (four and one-half minute), twelve-tone piece twice, since director John Corley felt that "there is so much

The MIT Concert Band, directed by John Corley, presents: 'Overture Fier Harmoniemusik, Opus 24,' by Felix Mendelssohn; 'Fantasia for Band,' by Vittorio Giannini; 'George Washington Bridge,' by William Schuman; 'Three Pieces for Band,' by Edward Miller; 'Variants on a Mediaeval Tune,' by Norman Dello Joio; 'Jericho,' by Merion Gould. Kresge Auditorium, October 30, 1964.

packed into it you don't get it all when you hear it the first time."

The Miller is a rarity, a twelve-tone piece which sounds almost harmonic. It makes great use of percussion, and produced a sound very unlike the usual harsh one of a twelve-tone piece. The band did a good job on it.

The highlight of the program was the next-to-last number, 'Variants on a Mediaeval Tune,' by Norman Dello Joio. This work ranks as one of the greatest works for band, in my opinion. It is an unpredictable tune, with twists of melody and phrase, and has unusual scorings which are very effective (piccolo and bass clarinet duet, for example). Low woodwinds came out to good advantage in this piece, especially the contrabassoon, which was played much more competently than last year. Although tuning sometimes faltered, the band gave an inspired performance to an inspiring work.

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'Cartouche' fine Gallic humor

By Richard C. Art, Jr.

Cartouche, starring Jean Paul Belmondo and Claudia Cardinale, is fine Gallic humor. Cartouche is a mixture of Tom Jones spirit, Douglas Fairbanks action, and Keystone Cops slapstick. Although the dialogue is entirely in French, the subtitles are adequate and the "language barrier" is no problem. The plot is nothing exceptional, it involves the exploits of a Parisian Robin Hood and his gang and is filled with scenes consistent with this type of scenario. Cartouche is a thief and an argument with the robber chief, played by Marcel Dalio, causes him to join the army to escape Dalio's wrath. While in the army he acquires

Written by Philippe de Broche. CARTOUCHE: produced by Joseph E. Levine, starring Jean-Paul Belmondo, Claudia Cardinale, Marcel Dalio.

two companions ably played by Jean Rochefort and Jess Hahn. These three go "over the hill" with the payroll and in an inn along the road to Paris they meet with Cartouche's gypsy sweetheart, Venus, and entrust her with the take. In the scene at the inn, Belmondo demonstrates his nimbleness and swordsmanship in one of the two best swashbuckling fights that has appeared on film in recent years.

Arriving back in Paris, they find that Dalio has kidnapped Venus

and taken the gold for himself. In the showdown that follows, Cartouche supplants Dalio as leader of the gang and forty minutes of riot begin. Cartouche gains virtual control of the city by stealing, bribery and appeal to the lower classes. Although Venus is beautiful, Cartouche courts Isabella the wife of his chief adversary, the chief of police. While waiting for a rendezvous with Odile Versois the police capture Cartouche and prepare to bring him to a party the Chief and his wife are giving. One has the feeling that the chief cares less about the courtship, which he knows of, than capturing Belmondo who has completely usurped his power over the people.

As Cartouche is being brought on the road to Paris, Venus, who is still faithful despite Cartouche's seeming cold to her, executes a raid on the troop of guards and sets him free. We find that he still loves her, but it is too late for she is shot as she is trying to escape. Cartouche carries Venus body to the Chief's party, where he strips the jewels from the assembled guests and covers Venus' body with them. He then pushes a coach containing her jewel covered body into the river. The movie ends here on a rather more philosophical note than the bulk of the production, but the loss of the true heroine and the tenderness of the hero are all part of the formula. Cartouche is refreshing because this formula hasn't been used in American movies since the revival of the C.B. DeMille point of view in the late fifties.

Claudia Cardinale who plays Venus acts, well, but her part is not demanding. One senses potential acting quality lacking in many "new" stars. Belmondo is not a handsome hero, but his nimbleness and comic sense make his portrayal of the title role effective and enjoyable. The rest of the cast is well matched, and although this is by no means a "great" picture, it is well worth seeing.

600 psychiatrists discuss teaching of their profession in Symposium

Over 600 psychiatrists attended an October 30 and 31 symposium in MIT's Kresge Auditorium. The symposium on "The Teaching of Dynamic Psychiatry," was sponsored by the Psychiatric Service of Beth Israel Hospital in Boston; its stated purpose was "a reappraisal of the goals and tech-

niques in the teaching of psychoanalytic psychiatry." Separate panels at morning and evening sessions treated problems with medical students, psychiatric residents, and physicians in the community.

A principal banquet speaker, Dr. Grete Bibring, treated "Can Psychiatry be Taught?"

Making the Scene

THIS WEEK MUSIC

Piano Concert—Jordan Hall, Nov. 4, 8:30; music of Beethoven, Chopin, Faure, Ravel, Bloch, Copland; free.

Folklore Concert Series—Josh White, John Hancock Hall, Nov. 6, 8:30; \$4.00, \$3.25, \$2.50, \$2.20.

MIT Orchestra Concert—Nov. 7, Kresge Auditorium.

King's Chapel Concert—Cambridge Festival Orchestra, Nov. 8, 5:00, works for choir and orchestra; free.

Gardner Museum—Volker Gwinner, organist, Nov. 8, 3:00, free.

Boston University Symphony Orchestra—BU Concert Hall, Nov. 9, 8:30, free — BU Concert Hall, Nov. 9, 8:30, free.

LECTURE

Dr. Raphael Patai — "What is Hebrew Mythology?" Nov. 8, 8:00, Kresge Auditorium; free.

Ford Hall Forum — James Farmer, on civil rights and integration, Jordan Hall, 8:00, Nov. 8.

THEATRE

Wellesley Experimental Theatre — "The Love of Don Perlimpin and Belissa in the Garden," Nov. 6-7, Jewett Auditorium, 8:00; \$5.00.

BU Opera Workshop — Nov. 13-14, 8:30, BU Theatre; excerpts from Don Giovanni, Madame Butterfly, Falstaff, and others.

NEXT WEEK MUSIC

Budapest String Quartet — Nov. 13 and 15, 8:30, Jordan Hall.

Chapel Organ Concerts — Joseph Coutret, Nov. 15, 4:00.

Gardner Museum—Myrna Ruiz, pianist, Nov. 15, 3:00, free.

LECTURE

Ford Hall Forum — Isaac Asimov, "Science Opens New Horizons for

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Juilliard String Quartet to perform in Kresge this Sunday for the MIT Humanities Series

The Juilliard String Quartet will present a concert of chamber music in Kresge Auditorium November 8 at 3:00 as the second event of the Humanities Series.

Their program this year includes the Mendelssohn-Bartoldy 'Quartet in D major,' Beethoven's 'Quartet in F minor' and Bartok's 'Fourth String Quartet.'

The group was established in 1946 as Quartet-in-Residence of the Juilliard School of Music in

New York. In 1961 they became the first American string quartet invited to visit the Soviet Union, and they will return in 1965.

Tickets for the entire Humanities Series are \$10.00. Single performances are \$2.50, at the Kresge Box Office.

BSO Concert

Friday, Nov. 6, 2:00; Saturday, Nov. 7, 8:30; Symphony Hall, Sir John Barbirolli conducting: PURCELL—Suite from the Dramatic Music of Henry Purcell (arr. Barbirolli); Haydn—Symphony in G major, "Oxford," No. 92; ELGAR—Symphony No. 2 in E-flat, Op. 63.

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movies . . .

Disney produces another gem

Walt Disney's 'Mary Poppins,' now playing at the Gary Theatre, combines all the elements of the standard Disney formula: wholesome fun, colorful setting, and happy ending with an unexpected dividend.

Besides being cute, the movie is actually funny. Two small children are without a Nanny a chaotic situation in England. Mary Poppins, more youthful than her literary counterpart because the children wanted rosy cheeks, arrives in a gust of wind to fill the position. This same gust of wind has neatly disposed of twenty or so venerable dames competing for the same position by blowing them all over the rooftops to the west.

Since Mary doesn't really want

MARY POPPINS: produced and directed by Walt Disney, starring Julie Andrews and Dick Van Dyke, color by technicolor, at the Gary Theatre, Boston.

to drag those kids around all by herself, a handsome young chimney sweep soon enters the picture. Together, they change the lives of a banker father, whose orderly life is upset by a singing cook, and a suffragette mother, who is too busy leading the ladies down at the prison in song to mind her own children.

Disney's master craftsmanship is evident in this movie. Mary Poppins and following fly through the air, walk up smoke steps, and win the Derby on wooden merry-go-round horses, with no one blinking an eye, except the father when the tale is recounted.

In several delightful sequences, Disney has combined animation with the live setting. This reinforces the element of fantasy that is so frequently juxtaposed with utter reality (We'll play a game called clean up the nursery) that the viewer forgets to distinguish between the two.

Julie Andrews, who flies in pink

high buttons with her toes neatly turned out, is excellent as the young Mary. Dick Van Dyke shows that he can sing and dance as well as clean chimneys; but he is not the only one. Everyone sings, even prim and proper Mary Poppins. The songs will keep you singing for days.

Half the charm of the movie are the two children who play normal kids with freckled noses and protruding ears. They help to make it a warm, wonderful and totally unrealistic movie. Disney initiates you completely into his magic world of the clean sidewalk and happy ending where everything is viewed through rose-tinted glasses. It is guaranteed to make your date misty.

The International for the Protection of Animals has discovered that nylon stockings are far safer than rope for securing the legs of animals prior to transporting them to high ground. Rope is apt to injure the legs of a struggling animal.

Poetry anthology to be gathered

The Sheridan-Kent Press is preparing a multi-volume anthology of university student poetry from every major college and university in the United States and Canada.

There is no limit to the number of poems a student may submit on any style of subject, although shorter poems will be preferred.

The purpose of the anthology is to collect under one title the best poetry of today's students, poetry that would otherwise go unnoticed.

The poems, along with a short autobiographical note mentioning the college attended, and a self-addressed stamped envelope, should be sent to Mr. M. David Lewis, Editor, 1093 McDonald Ave., Chomedy, Quebec, Canada. Deadline is November 30.

French girl likes MIT 'boys' better than Harvies

By JEFF TRIMMER

DeGaulle may not be in complete accord with US policy, but one French girl likes MIT policy. Her name is Flavie Revillon, Parisian debutante, who is on a visit to the United States with her brother, Patrice, and her mother, Mme. Jacques Revillon, wife of the fur, perfume, real estate, and financial tycoon.

Flavie was visiting friends in Wellesley, Massachusetts, when she was introduced to both MIT

and Harvard students. She preferred the MIT students because she "could speak their language, they were more interesting and individualistic to talk to." The "boys from Harvard," she said "all looked and talked alike." With them it was all "Money, money, money."

The generally favorable comments toward MIT students were made in an interview for the social column of the Chicago American.

B'nai B'rith presents another Burg Lecture

Dr. Raphael Patai, folklorist, anthropologist and Director of Research at the Herzl Institute in New York, will deliver the eighteenth Morris Burk Memorial Lecture November 8 in Kresge Auditorium at 8:00.

The Burg Lecture is presented with funds donated in memory of Morris Burg, a well known Boston businessman and civic leader, for the purpose of bringing a Jewish scholar to the campus twice a year to address the community.

Dr. Patai is a graduate of the University of Budapest and the Hebrew University in Jerusalem. Before coming to the United States, he was director of Research at the Palestine Institute of Folklore and Ethnology.

In the United States, he has served as Professor of Anthropology at Dropsie College and as visiting professor at several other universities and institutions of higher learning. He is presently Director of Research at the Herzl Institute.

He has published some two dozen books, the most recent being "Hebrew Myths: The Book of Genesis."

An informal reception in Dr. Patai's honor will follow the lecture. Admission is free.

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"Pomp and Circumstance: C. P. Snow" by Robert Adams: An appraisal of Sir Charles' writings, his new book, Corridors of Power, and his contribution to the two-cultures dialogue.

"Labor's Mutinous Mariners" by A. H. Raskin: A report on the rivalry between Joseph Curran of the National Maritime Union and Paul Hall of the Seafarers International Union.

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Contemporary work to be given by MIT Symphony in fall concert

The MIT Symphony Orchestra will present a performance of Brahms' "Concerto No. 2 in B-flat for Piano, Op. 83" on November 7, 1964 at 8:30 p.m. in Kresge Auditorium. Prof. John Corley will conduct the orchestra; Dr. Kenneth Wolf of the Harvard Medical school will be soloist.

John Bavacchi's "Suite for Orchestra" and Beethoven's "Overture 'Leonore' No. 2" will also be included in the program.

John Bavacchi, a former MIT Course XV student, has had works commissioned by the New York Woodwind Quintet and members of the Boston Symphony. He is at present an instructor at the Berkley School of Music in Boston

and is composing a "Festival Symphony" on commission for the MIT Concert Band.

Members of the MIT Community may obtain free tickets at the booth in Building 10.

Transport study notes travel facts

(Continued from Page 6)

The problems the members of Project Transport met in trying to fulfill these requirements and concepts which might possibly meet them will be discussed in next week's issue of The Tech.

Building permit received from MDC for boathouse; Plans remain incomplete

The Institute has received a building permit from the Metropolitan District Commission authorizing construction of a new MIT boathouse. One proposed site for the structure, once included in Second Century Fund campaign plans, lies along the Charles River between 403 Memorial Drive (Delta Kappa Epsilon) and 410 Memorial Drive, Conner Hall.

Sources within the Institute told The Tech that the application for a permit was a "formal procedure," and that plans for the boathouse were incomplete and as yet lacking final approval.

Looking Back

By JEFF TRIMMER

75 Years ago

There are twenty-eight Co-eds in attendance this term. They are divided among the different courses as follows: Natural History, 3; Chemistry, 5; Architecture, 1; General, 2; Special, 17 . . .

The Freshmen are having their first taste of "those little exams." . . .

50 Years ago

The show for the Tech Night this year is one of the liveliest and girliest that Tech men have attended in a body. The dancing is excellent, the singing good, the girls are pretty, and they don't care who knows it.

It is a mirthful melange of lingerie and laughter, that is where there is lingerie. . . .

25 Years ago

The scheduled pie eating contest between a sophomore and fresh-

man team had to be cancelled. It seems that the glove fight caused the boys to lose their appetite. At any rate there were no contestants . . .

Only a win in the Tug-of-War saved the freshman class from being whitewashed in the thirty-ninth annual Field Day competition last Friday afternoon. The final standings gave the Sophomores an undisputed 12-3 edge in points over their freshman rivals. . . .

Several dormitory scientists trying to solve an 8:01 problem, left their marks for posterity last Wednesday night, when a cannon ball which they were trying to raise got out of control and dented the sidewalk in back of Wood.

The experimenters were pulling the 600 pound weight up the fire escape, when the rope parted and released the sphere. The laws of gravity operated fully, and the ball landed with a resounding thud. . . .

10 Years ago

Senator Lyndon B. Johnson, Democrat, was reelected from the State of Texas, Hubert Humphrey, Democrat, was reelected senator from the state of Minnesota. . . .

Is arise on glorious morn of riotous ceremony known as feel-dai, is find much liquescence upon glebe, is much more of same in process of descent . . . (morning after Field Day? — Ed.)

Committee finished for Spring Weekend

Selection of the eight-man Spring Weekend Committee was completed last Saturday afternoon. The election of seven out of the 45 applicants was made by Dave Rubin '65, previously elected chairman of the committee, and the Incomm Executive Committee.

Those selected were: Norm Eckstein '65 (ZBT), Jack Hudgens '65 (SPE), Tom Jones '66 (SC), Bruce Powell '66 (DTD), John Freeman '66 (PGD), Mike Cohen '67 (Bexley), and Jerry Tomanek '67 (BTP).

Spring Weekend is scheduled this year for April 23-25, the weekend after Easter.

Summer jobs abroad

MIT students seeking jobs abroad, with Course XV or XIV interests, have a new opportunity. Tomorrow, the newly formed MIT chapter of the Association Internationale des Etudiants en Sciences Economiques at Commerciales will introduce a program of summer traineeships abroad for interested students. The meeting will be sponsored by the Foreign Opportunities Committee of Incomm in the Hayden Library Lounge at 7:30 p.m.

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At the 1964 stockholders' meeting, Arjay Miller, President of Ford Motor Company, emphasized the Company's far-sighted recruitment program and its accent on developing management talent:

"One aspect of our planning is crucial to the success of everything else we do. It engages the best thoughts and efforts of our whole management team, from top to bottom, throughout the world. I am speaking of the development of management. The immediate future of our Company depends heavily upon the abilities of the people who are now key members of our management team.

"In the longer run, our future depends on what we are doing at the present time to attract and develop the people who will be making the major decisions 10 to 20 years from now. We are developing management competence in depth in order to attack the problems that will confront a company of great growth—and great growth (both in profits and sales) is exactly the goal we have established for Ford Motor Company.

"We are continuing to emphasize recruiting. Last spring, 180 of our management people devoted part of their time to recruiting outstanding graduates from colleges and universities throughout the U.S. Last year, these efforts resulted in our hiring over 1,000 graduates, 220 more than the year before.

"We are seeking and we are finding young men—and young women, too—with brains and backbone—people who have the ability and the desire to make room for themselves at the top. We give our trainees challenging assignments with as much responsibility as they can carry. We promote them as fast as they are ready. Those who are interested in easy security soon drop out. Those who have what we want stay with us, and move up quickly to increased responsibility and the pay that goes with it. Thanks to the quality of the people we are recruiting and developing, I am firmly convinced that our outlook is most promising."



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By David Vanderwerf

College World

Looking for personal instruction? Consider investment in Carthage

Editor's note: After four years, College World has changed hands. Toby Zidle, one of The Tech's most popular columnists, has finally had to relinquish the job. I hope I can do a job worthy of my predecessor.

The Personal Touch

Now that the term is well underway, many of you may be wondering if transferring might not solve your problems. If so, reports the Technology News of the Illinois Institute of Technology, there is a place where you can guarantee a personal relationship with faculty eager to please you. What's more, there's no tuition—you pay one lump sum for all fees, and from then on you have the run of the campus.

The school? Carthage College, Carthage, Illinois. The reason for this arrangement? Carthage is for sale. Price—\$1.5 million. Yes, friends, for only 1.5 times the Institute's annual operating deficit, you, too, can own a college. Included in the school are 37 buildings and a 30 acre campus. For this paltry sum you can become Biggest Man on Campus, get personal attention from the staff, and, most important, cease to worry about parking problems.

No Parking?

Speaking of parking, employees of Michigan State University, reports the State News, were doing

more muttering than speaking about that school's new parking regulations.

Employees, it seems, must buy parking stickers in order to park on campus. They may buy one, costing \$18, which entitles them to park on any available space on campus. For an additional \$30 they may buy a sticker for a special reserved spot in which only they can park. One Jerry Puca, an employee of MSU's Data Processing staff, bought the cheaper sticker.

When Puca arrived for work, however, here were no spaces left in the lots, except for a few reserved for people with the expensive stickers. In fact, throughout the day the reserved spaces were empty. Somewhat perturbed by this, Puca investigated.

The answer to the problem was simple. Since the reserved space stickers also gave their owners the right to park anywhere on the lots, their owners were not using the reserved lots, but were using the nearest space to their offices, in the unreserved section. While they could take an unreserved spot, however, drivers with the cheap stickers couldn't occupy the reserved spots.

Diplomacy seems to have paid off, however. Owners of \$48 stickers, when informed of the problem, agreed to take the reserved space—and the longer walk.

Big Sister

It's surprising that parking violations haven't flourished at MSU, though, considering the people who give the tickets. To free the campus police for other duties, the University has hired two "parking patrolwomen."

Patrolling the area on radio-equipped motor scooters, the ladies will, to quote the chief of police, "not just write tickets" but "check on compliance with all parking rules." This, concludes the news, may cut down on epithets directed at ticket-writers. Getting a ticket may not be that much fun, though—both of the patrolwomen are married.

70+40=?

Parking isn't the only space lacking in schools these days, reports the Colorado aDily. About 40 men at Colo. State Univ., says the story, are spending their first week in dormitory lounges. An additional 70 are living three to a double room.

The reasons for this crowding were two. First, the \$50 non-returnable deposit for dorm rooms which was instituted this year has discouraged people from leaving. Second, off-campus housing has been in short supply due to the refusal of landlords to sign an anti-discrimination statement required by the university.

Meanwhile, the women's halls have approximately 100 vacancies due to a new ruling that girls over 21 may live in any type of off-campus housing. College officials, apparently, did not consider the obvious (to Techmen) solution.

Can you relocate?

Back at Michigan State, though, Colorado's problems seem trivial. A 50 day strike of construction workers was worrying administration officials, since if two dormitories under construction were not completed, some 2400 students would have to be temporarily relocated. It was finally decided to push construction on rooms, and to complete the other facilities (lounges, classrooms and kitchens) as soon as possible thereafter. And you think Tech has construction problems.

Over 65 sign for Putnam contest; \$2500 fellowship awaits winner

Over 65 undergraduates have signed up for the twentyfifth William Lowell Putnam Competition, to be given to math students throughout America and Canada on December 5. First prize in the contest, which is sponsored annually by the Mathematical Association of America, is a \$2,500 fellowship for graduate study at Harvard University.

In addition to the single competition, many schools enter teams of three students. MIT has traditionally fared well in this competition, in past years members of the Department of Mathematics have contributed to the operation and composition of the contests.



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mistakes...

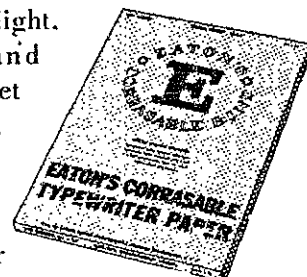
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SHULTON



Rights speech given by CORE's Farmer

James Farmer, National Director of the Congress of Racial Equality will be at MIT Kresge Auditorium on Wednesday, November 11, 1964, at 8:00 p.m. He will speak on "The Civil Rights Movement in the North."

Tickets will be on sale at the Civil Rights Committee Booth, November 5-10 in the lobby of Building 10.

IFC begins drive for hemophilia group

The Interfraternity Conference is sponsoring a blood drive among the MIT fraternities.

Jim Sweeney '66, chairman of the drive, announced that the drive will end on November 19 when the Red Cross will collect blood from the pledged donors. The blood collected will be credited by the Red Cross to the New England Hemophilia Association.

By Monday, 370 pledges of blood had been collected from fraternity members. Sweeney stressed that those prospective donors under 21 must get parental permission to give blood.

Last year's IFC drive netted 211 pints of blood.

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Townes wins Nobel Prize for masers

(Continued from Page 1)

working in radar and microwave spectroscopy was the production of shorter microwaves.

At that time the idea came to him to produce shorter microwaves by controlled molecular or atomic activity. This led to experimentation and the development of the maser—an acronym for "microwave amplification by stimulated emission of radiation."

The first maser developed by Dr. Townes and his associates used ammonia as the active medium, and in 1954 the first experimental proof was obtained that amplification with the medium was possible.

In 1958, Dr. Townes and his brother-in-law, Dr. A. L. Schawlow showed theoretically that the maser principle could be applied to waves in the optical region. Together, they hold the fundamental patent on the laser.

Research continues

Dr. Townes came to MIT as Provost in 1961. Beside his administrative duties, he is carrying out fundamental research in association with Professor Ali Javan, who continues full-time work on maser



Photo by John Torode

Dr. Charles H. Townes, provost of MIT and Nobel Laureate in physics for 1964, surveys his research laboratory.

research and application.

He cited three main areas of his current work: studies of interactions of light waves and acoustic waves in materials; the

very precise measurement of distance; and high resolution spectroscopy employing infra-red light and used by maser techniques.

Intramural Results

Basketball

AEPI 58, Grad House C 17
Burton C 49, Baker D 20
Lambda Chi B 24,
East Campus Fourth 20
Theta Delta Chi A 33,
Grad House B 28
Delta Tau Delta 51, Theta Chi B 44
Baker C 46, Senior House C 12
Student House 41,
Chemistry Dept. B 34
Bexley Hall 31, ATO B 24
DKE 56, Burton "Rebels" 30
Burton B 39, Sigma Phi Epsilon B 24
DU 47, Chinese Students Club 40
Nuclear Eng. 59, Phi Delta Theta 28
Tau Epsilon Phi 40,
Burton Fine Fifth 26
East Campus Monroe 46, TDC B 22
Baker E 40, Pi Lambda Phi 22

J.P. '64 FRIDAY THE THIRTEENTH

Tech rifle men will hold rally Thursday

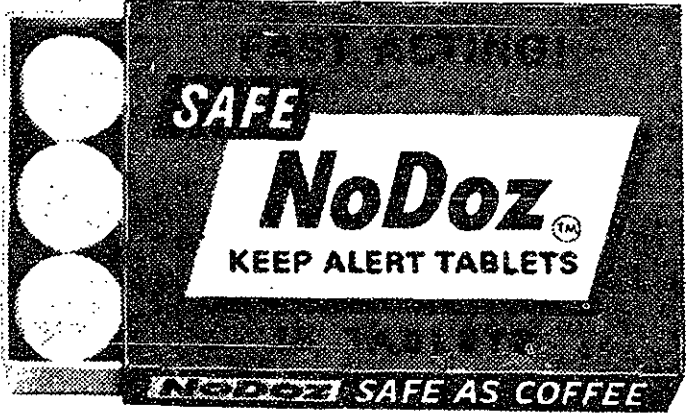
By Karl Frederick

A rifle team rally will be held at 5 p.m. on Thursday, November 5, in room 20-E-021, for the benefit of all freshmen and upperclassmen interested in shooting. Tech rifle men have outshot every team in the Greater Boston Collegiate Rifle League for the past four years and hold the present League match record score. Freshmen who shoot during the second and third quarters are eligible for Phys. Ed. credit. Free cider and doughnuts will be served.

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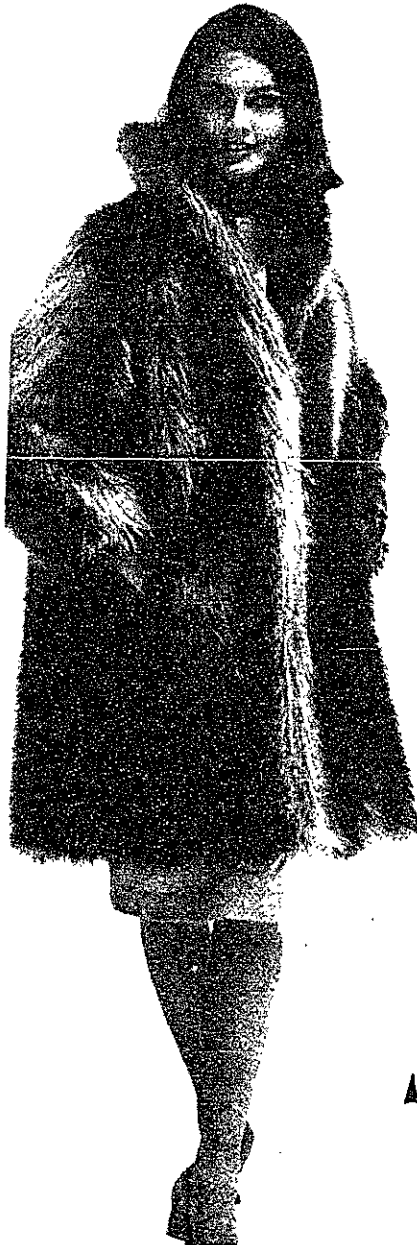
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Frosh sports

Sailors 4th in Priddy Trophy

By John Kopolow

The MIT freshman sailing team ended its fall competition this past weekend with the meet for the Priddy Trophy held here at MIT. Twenty-two New England colleges were represented on Saturday, only ten of which could qualify to race on Sunday. Tech finished fourth in the first day's competition, qualifying easily. However, they could do no better than fourth again on Sunday and as a result, finished 29 points behind the winner, the University of Rhode Island. URI totalled 94 points, followed by the Coast Guard Academy (74), Williams College (71), MIT (65), and Colby (63).

Foot leading Skipper

The leading skipper among the Tech sailors was George Foote, whose crewman was Peter Hurler. They managed to win merely one of the ten races on Sunday, thus accounting for their mediocre fourth-place finish. However, fall sailing is generally considered to be a warm-up for the main competition, which takes place in the spring. Last year's frosh took the New England Sailing Championship, and there appears to be no reason why this year's squad can't repeat.

Cross-country

The freshman Harriers had a disappointing week, finishing poorly in both of their meets. Northeastern literally ran away from both MIT and Tufts, as they took second through sixth places and finished with twenty points. Tufts had 52, although one of their freshmen, Bruce Baldwin, captured first place with a time of 12 min., 50 sec. Tech accumulated 63 points as Dan Hoban and Howard Friedberg finished 1-2 for them, ninth and fifteenth overall.

Fourth in Easterns

Four colleges participated in the Eastern Meet on Tech's home course at Franklin Park. Central Connecticut came in first, falling

MIT ruggers snap run of losses tying Harvard team twice

By Neal Gilman

The MIT Rugby Club ended its losing streak last Saturday by tying both games in a match against Harvard on Briggs field. Although still winless, the club bettered its season's record to no wins, 6 losses, and 2 ties.

The team played its best match of the season Saturday. Losing both games a few weeks ago to Harvard by 6-11 and 8-19, the club held Harvard to a scoreless tie in the first game and a 3-3 tie in the second. MIT was the first to score after three halves of aggressive play. In the middle of the first half of the second game, Ton Van Tienhoven '66 received a relay from a fellow back and sprinted 50 yards into the end zone for a try. Against a strong wind he attempted a conversion, but failed. Five minutes later, Harvard also scored a try, bringing the score to a 3-3 tie. These were the only scores of both games.

MIT, with renewed hope, faces the Harvard Business School here on Tuesday and Brown, away, on Saturday.

just three points short of a perfect score with 18. Providence College was far behind, in second place, with 46 points; Trinity had 77 and MIT 109.

Central Connecticut's George Conefrey finished first in a time of 13 min., 36 sec. for the 3.1 mile course. The number one Tech runner, Dan Hoban, could do no better than seventeenth with a time of 14 min., 58 sec. The frosh now point toward the All-New England meet at Franklin Park next Monday in hopes of making an improved showing.

How They Did

Cross country

MIT (V) placed 2nd in Easterns
MIT (F) placed 4th in Easterns
Northeastern 19, MIT (V) 45,
Tufts 67
Northeastern 20, Tufts 52, MIT (F) 63

Sailing

MIT (V) placed 2nd in White
Trophy at Coast Guard
MIT (F) placed 4th in Priddy
Trophy at MIT

Soccer

Bridgeport 5, MIT (V) 1
MIT (V) 4, Brandeis 0

Harriers 2nd in Easterns; Brown 3rd

By Armen Varteressian

MIT placed second in the 4th annual E.I.C.A.A. cross-country championships held last Friday in Franklin Park. Providence College was first by a large margin, with 19 points, followed by MIT's 71, with Central Connecticut State College a very close third with 72.

Brown 3rd in Easterns

Individual honors went to Barry Brown of Providence, who defeated all opponents by running the 3.7 mile course in 20:32. Brown was followed by teammate Paul Harris, who finished in 20:51. Close on Haris' heels was the first Tech scorer, Sumner Brown '66. Last year's individual champion, Ray Crothers of CCSC took 4th place in 21:14.

Tech scorers were: Brown, 3rd in 20:51; Rob Wesson '65, 14th in 22:50; Dick McMillin '65, 17th in 23:06; Bill Purves '66, 18th in 23:10; and Mike Oliver '65, 19th in 23:23. All Tech runners except Brown showed remarkable improvement over last year's places. In '63, MIT placed 3rd in the Easterns, with Brown 3rd, Wesson 19th, Purves 20th, McMillin 21st, and Oliver 28th.

Dunsley tops Brown

Tech's Sumner Brown suffered

his first defeat in regular competition earlier in the week as old rival Dave Dunsley of Northeastern took honors in the MIT-Northeastern-Tufts meet held last Tuesday. Dunsley ran the Franklin Park course in a remarkable 17:53, with Brown 23 seconds behind.

Northeastern took first place in the triangular with a near-perfect 19 points, leaving Tech and Tufts far behind with 45 and 67 points, respectively.

The other Tech scorers in the meet were Bill Purves, 8th; Rob Wesson 10th, Dick McMillin 11th, and Mike Oliver 14th.

Yesterday the squad ran in the Greater Boston meet at Franklin

Park with Dunsley and Brown again fighting it out. Next Monday the harriers will run in the New England Championships also at Franklin Park, expecting to improve on last year's 11th place.

Kiernan to speak

Dr. Owen B. Kiernan will address the Technology Matrons at MIT's Endicott House in Dedham, Tuesday, November 10 at 10 a.m.

Dr. Kiernan, Commissioner of Education for the Commonwealth of Massachusetts, and a member of the MIT Corporation, will speak on "Educational Priorities in the Mid-Sixties."



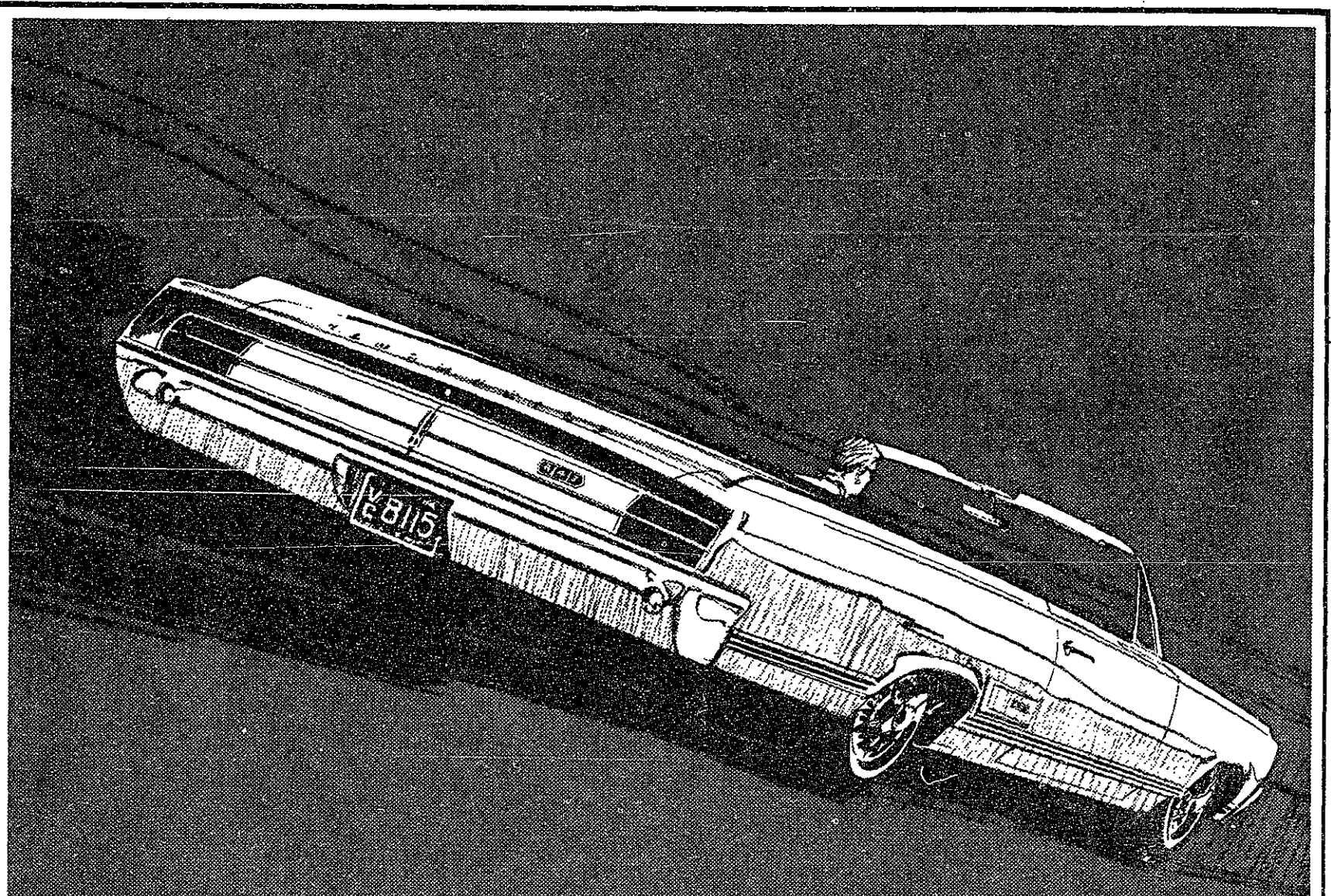
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Bridgeport soccer tops MIT 5-1; Stepaniuk scores lone Tech goal

Forty seven seconds into the second period was all it took for the University of Bridgeport soccer team to take a lead which it never lost and finally built up to a 5-1 romp over MIT at Bridgeport, Saturday.

MIT scored the first goal of the cold, windy afternoon as Nick Stepaniuk '65 booted one in at 7:45 of the first period. However, this lead was to last only nine minutes and fifteen seconds, when Ed Koolakas tallied the first of his two goals.

It didn't take long for the hosts to take the lead, as Ron Vertailles

scored the only goal of the second period, when he drove in the winning score at 0:47.

The second half proved to be easy sailing for Bridgeport, featuring another goal each by Vertailles and Koolakas, inside right and inside left, respectively. Their goals came within one minute of each other, at 6:15 and 7:08 of the third quarter.

The fourth period, in which subs on both squads saw plenty of action, had only one goal, when Bill Alton, a Bridgeport sub scored at 0:50, thus making the score 5-1.

The game was very disappointing for the Techmen as it lowered their record to 3-5-1 with only two games remaining. This week MIT will entertain Brandeis on Monday at 3:30 and the University of Connecticut on Thursday at 3:00, both games to be played on Briggs Field.

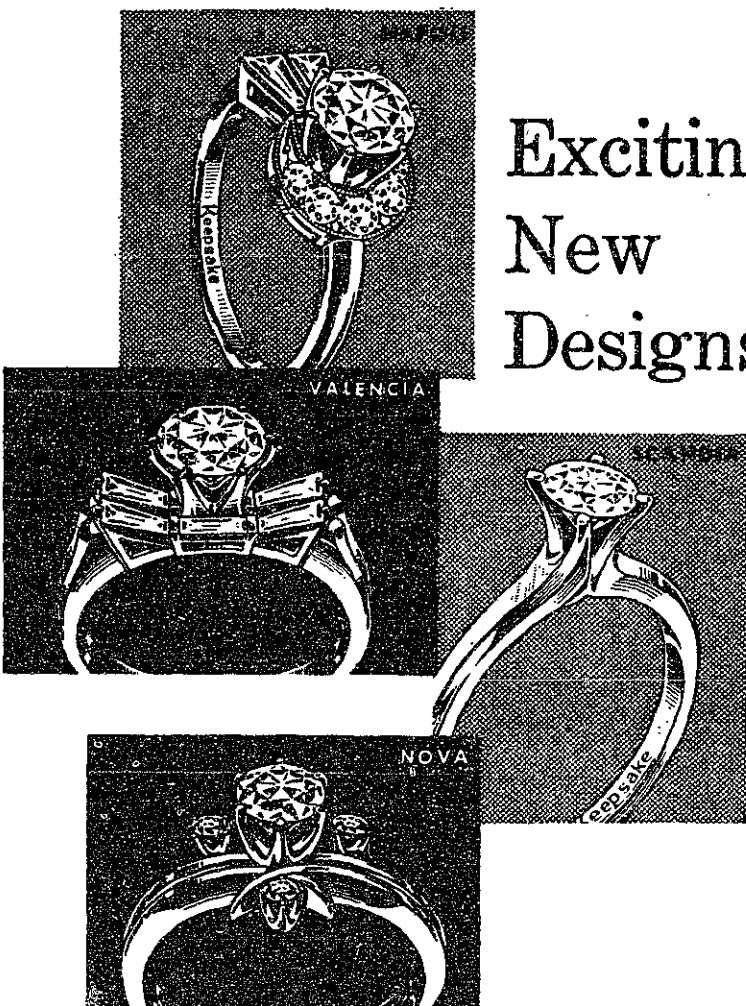
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IM Basketball

Defenses strong in 1st week's games

By Russ Mosteller

The first week of major league intramural basketball produced no really surprising results. Games generally were fairly close and defense was predominate, as no team scored more than 63 points. Grad Economics, Grad Management Society, Grad House A, and Political Science—the supposedly number one and two teams in each league—all opened the season with victories. The only result that might have caused a few lifted eyebrows was Theta Chi A's tromping of Westgate, 63-36.

Grad Economics, last year's play-off champion, opened its defense of its American League title with a 48-37 win over Lambda Chi Alpha A. The game was actually a lot closer than the score indicates.

Grad Econ led by seven points at the end of the first half, but it was still a touch-and-go game until the middle of the fourth quarter. Both teams began to foul to get possession of the ball, and Grad Econ was able to convert their free throws into points while LXA could not.

In a battle of dormitories, Baker House A beat Burton House A 44-37. The game promised to be a run-away as Baker jumped out to an early 21-4 lead. Burton, however, kept plugging away and their half-time deficit was only nine points, 25-16. Freshman Dennis Matthies accounted for more than half of Burton's tallies, amassing 19 points.

In the closest game of the week, Senior House A defeated Sigma Alpha Mu 37-36. The Sammies led most of the game (22-15 at half-time), but Senior House finally overtook them late in the fourth quarter. With only a fraction of a minute left, Senior House led by 3 points, but a Sammie field goal cut the lead to one. At this point, Senior House went into a stall. The Sammies gained possession of the ball with one second left, but were unable to get off a shot.

Grad House started the season on the right foot with a 47-34

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Photo by Bill Ingram

TEP guard Stu Vidockler '66 shoots against Baker House in an intramural basketball game played last Thursday night in the MIT Armory. He scored a total of six points in the game which TEP won by a score of 42-29.

drubbing of Alpha Tau Omega. Grad House jumped off to an early lead and maintained a ten to fifteen point advantage throughout the game. The second half was played on about equal terms, but Grad House's thirteen point half-time lead left the rest of the game devoid of excitement.

The Political Science-Phi Mu Delta game could basically be described as five against three. John Yeasley '66, Paul Dalgren '68, and Francis Tolve '66 contributed a total of 42 points to the PMD cause, but their teammates added only three. Political Science jumped out to a 21-6 lead but actually trailed 41-40 late in the fourth quarter. Political Science won 51-45.

Neither of the remaining games (Grad Management Society vs.

Phi Gamma Delta and Theta Chi A vs. Westgate) were even close. Grad Management wasted no time in disposing of the Fijis, 52-32. Theta Chi A had an even easier time of it with Westgate, 63-36. Dennis Hinrichs '64 tossed in 23 points for Theta Chi, equaling the total scored by Stu Nemser '66 for Sigma Alpha Mu earlier in the week. They were the only individuals to reach the 20-point mark during the week.

The coming week promises to be an exciting one. The American league features a contest between Grad Economics and the surprising Theta Chi team.

National League action will be highlighted by games between Political Science and Baker A, and Phi Mu Delta and Grad House A.

IM cross country teams to run Veteran's Day

Intramural cross-country runners take to Briggs Field for their annual fall meet next Wednesday, November 11 at 3:00 pm. They will be shooting for the team title held by Burotn House and the individual title taken by Pete Staecker '64. Last year some 63 runners and 14 teams entered the relatively new sport, and this

year's turnout should be even larger.

Teams consist of five men; for groups entering ten or more men, the first five make up the A team, the second five the B team, and so on. Non-finishers and empty positions on incomplete teams are given last place points. The course will be two laps around Briggs Field, about one and three-quarters miles. Rosters are due this Friday by 4:00. Questions should be directed to manager Dick Nygren '66 at x3204.

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Sailors come in second as protests occur frequently

By W. Thomas Compton

The MIT sailing team raced at Coast Guard Saturday and Sunday for the White Trophy and the New England Sloop Championship. Although MIT was heavily favored, University of Rhode Island edged past with a six point margin.

This is the first time this year that the sailors have failed to win a trophy race. Last year Don Schwanz '66 skippered the team to victory.

Winds were light on Saturday but picked up on Sunday. At the end of the first day of racing MIT and URI were tied for first place. But several incidents on Sunday proved the undoing of Tech.

Quadruple protest

Everybody was across the starting line at the beginning of one race and two boats were trying to get back. A third boat prevented their return and a fourth boat was hit in the confusion. Four protests were filed simultaneously and three boats were thrown out of the race. Later, in a highly irregular double hearing, the protests were reddecided and URI was reinstated. This tied URI with MIT for the lead, instead of putting them seven points behind.

MIT immediately jumped to a lead Sunday but on the third race,

they took a chance that lost the regatta. MIT was on port tack and crossed in front of a boat on starboard tack. Schwanz thought they had room to cross but the skipper of the other boat did not, and came about. He later filed protest. Since there were no witnesses and it was only one man's word against another's, the boat on starboard tack was awarded the protest because it had the right of way.

Late Sunday URI fouled another boat but nobody protested. If a protest had been filed, URI would have been thrown out of the race and Tech would have won.

Jack Turner '66, Ed Shaw '65, and Jim Cronburg '67 crewed for Schwanz as they won three of the ten races. They also had two seconds and two thirds.

MIT and Dartmouth were tied in number of points and number of times they beat each other, but MIT had more first places and were awarded second place. Dartmouth was third, and Northeastern, Trinity, and Holy Cross were far back in the pack.

There are only three regattas left on the fall schedule and two of them are here on the Charles. Next week is the Schell Trophy and the week after is the Staake Trophy.

Betas take IM football finals

by Art Perlman

In the finals in the A Division Beta Theta Pi, defeated defending champions SAE in a highly exciting, low scoring contest 8-0. The game was marked by brilliant defensive play and both offenses were highly contained. Earlier in the week, Beta Theta Pi beat Delta Tau Delta 12-8 in a re-play of the semi-final tie. In the B-League final, Phi Kappa Theta outscored Nuclear Engineering 24-18 to take the championship.

Betas score safety

In the second quarter SAE was forced to punt from deep in their own territory. The Betas rushed four linemen, backing the SAE's into their own punter and blocking the punt. Bob O'Donnell '66 caught the blocked ball behind the SAE endzone, scoring a safety. Later in the same period the Betas drove again. Quarter Steve Schroeder '67 hit Dick Carpenter '64 with a 30-yard pass putting the ball on the 15-yard line. A pass to Mike Ryba '67 put the ball on the three but time ran out.

The second half was mostly a replay of the first. As play began, SAE was rolling but their machine was halted at the 15-yard line. There was no more scoring in the game until all but three minutes of playing time had gone. Schroeder hit Greg Wheeler



Photo by Scott Mermel

Ted Nygreen '67 of SAE comes up from safety to stop Beta quarterback Steve Schroeder '67 for a short gain as John Rutherford '67 moves in. The Betas won the Sunday game by an 8-0 count and took home the IM football trophy.

'67 with a 40-yard sideline pass in one of the few lapses of the superb SAE defense. Two plays later, a pass to Wheeler was good for six points and sewed up the 8-0 win.

The entire game was a big defensive struggle. The big Beta line stopped the SAE rushing and kept SAE quarterback Fred Souk '65 corralled with a hard rush. The SAE secondary stopped the Betas' short pass and run game with just one lapse. Stars for the Betas were quarterback Schroeder, punter Dick Nygren '66, and linebacker Tom Chen '68. Souk played his usual good game for SAE.

To get into the finals, the Betas had to beat the Delts in a replayed game earlier in the week. The original game had ended in a 6-6 tie after two overtime periods, but a protest had been lodged by the Betas. When the protest was upheld, the Delts' touchdown was changed to a safety and the game was played from the point of protest near the end of the first half. Both teams scored again in the replayed half, making the final score 12-8 in favor of the Betas. The Beta score was set up on a 25-yard Schroeder to Wheeler pass. Kent Groninger '63 scored on the following play on a short

pass. The Delt score came on a 60-yard pass reception by Paul O'Lague.

In the B Division final Phi Kappa Theta outscored Nuclear Engineering 24-18 to gain the championship. Phi Kappa Theta scored in each of the first three quarters to build up an 18-0 lead going into the final stanza.

Nuclear Engineering, however, came roaring back with three TD's in the fourth quarter to tie it up, thus sending the game into overtime.

In the overtime period, Phi Kappa Theta got the kickoff and was forced to punt on fourth down. Nuclear Engineering then ran two plays, but a timely interception by Larry Schwoeri '66 gave the ball to Phi Kappa Theta near the Nuclear Engineering 20 yard line.

Schwoeri then proceeded to score on a 5-yard pass several plays later for the winning margin in the sudden death play. Scoring the points for Phi Kappa Theta were Schwoeri with 11 points, and Al Tervalon '65 and Tom Jernick '65 with six points apiece. Jerry Sovka picked up two touchdowns and Larry Foulke one touchdown for the losing Nuclear Engineering cause.

Betas win IM wrestling

Beta Theta Pi captured the intramural wrestling crown held last Friday and Saturday in the duPont wrestling room with a 57-point total. Three champions and two third-place finishers led the Beta A team over second-place Burton A, who had 35 points.

Defending champion Lambda Chi Alpha A fell to fourth place with 27 points in a field that was larger and much tougher than any in previous years. Last year's second-place team, Phi Delta A, picked up third place with 33 points.

There were individual champions crowned in each of the eight weight classes, and third and fourth place finishers were also determined in consolation rounds. The field this year consisted of 145 individuals and 35 teams, a record turnout.

In the 123-pound class, Steve Bishko '68 of Beta A scored a second-period win over Tom Lang '68 to take the crown. Bishko pinned three opponents on his way to the championship, including a 20-second pin in the first round. His toughest match was a 2-0 decision over Ken Helstrom '65 of East Campus, who finished in third place. Karl Frederick '65 from Senior House picked up fourth place.

The 130-pound class was taken by Bill Harris '68, Burton A, by decisioning Dixon Cleveland '68, representing Phi Delta Theta A, by a 5-0 count. Harris won his preliminary matches by taking two decisions and a forfeit. Dana Ballard '67 of Pi Lambda Phi took third place on a decision over Steve Passage '68 of Alpha Tau Omega A.

Ralph Kaden '67 took the 137-pound championship with 3-0 decision over Brad Sermon '68, wrestling over Burton B. Kaden, wrestling independent, also took quickest pin honors with a 13 second first period win in the second round. He won his other three matches by very close one-point decisions. Frank March '67, Burton A, won third place at 137 with a decision over Doug Spreng '65 of Phi Delta Theta A.

Norm Hawkins '68 of Phi Delta Theta A emerged victorious over the 147-pounders by pinning Dale Stahl '68 of Delta Upsilon in the second period. The increased competition in the class was demonstrated when last year's champion, Don Oestreich '67, could manage only fourth in losing third place to Tom Chen '68

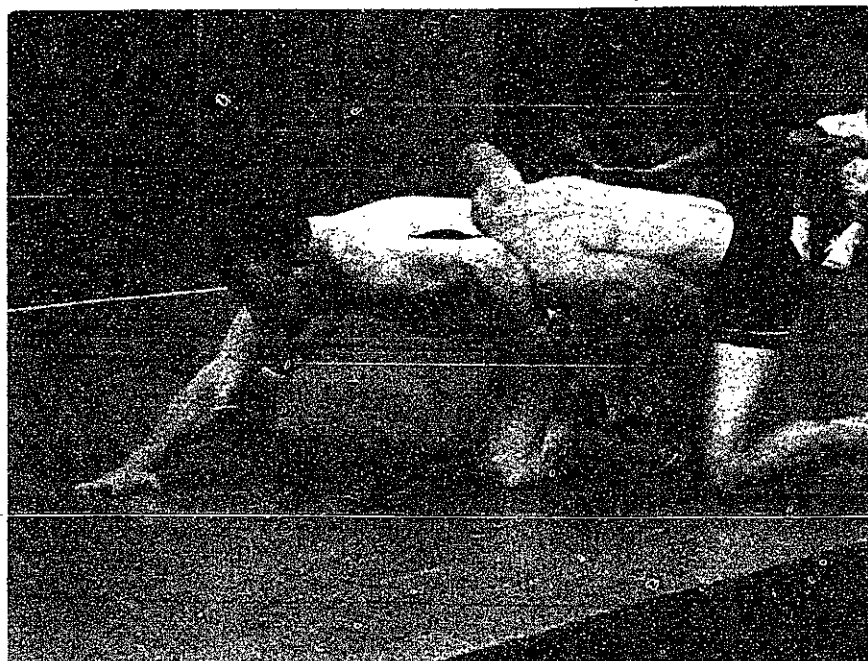


Photo by Scott Mermel

Steve Bishko '68 of Beta Theta Pi rides Ken Helstrom '65 of East Campus in the second period of the IM 123 lb. wrestling championship match. Bishko won on a late reversal 2-0. The matches were held Friday and Saturday in the wrestling room.

of Beta A. John Fishback '68 of Delta Upsilon won the 157-pound class in a thrilling 7-5 overtime victory over Don Pryor '68 of Beta B. Fishback made his way into the finals with two second-period pins and a 9-3 decision. Rick Young '68 of Beta A was given third place by virtue of a forfeit when Ted Nygreen '66 of SAE was injured.

The 167-pound class saw Bob Thomas '65 of Sigma Phi Epsilon take the championship with a tight, 4-2 decision over Ken Morash '65 of Lambda Chi A. Thomas also scored two tight decisions and a 27-second first period on his way to the finals. Ed Foster '65 of East Campus A pinned Richard Gardner '68 of Burton C to take third place.

In the 177-pound class, Bob O'Donnell '66 of Beta A picked up the crown by pinning Bob Wiley of Phi Delta A in the second period. O'Donnell scored two other pins, one in 15 seconds of the first period, and a 1-0 decision to make it to the finals. Steve Reimers '68 of SAE pinned Jeff Silverman '68 of ZBT A for third place in the division.

The unlimited division crown was taken by Dave Penny '66 as he scored a first period win over Dave Waltz '65 of Sig Ep. Penny pinned two other opponents in the first period and won a forfeit in sweeping the heavyweight class. George Berbeco '66 of ZBT A

out-pointed Alan Simon of Tau Epsilon Phi A for third place among the unlimiteds.

This year's tournament saw some new and better ideas. Most important was numerical ordering of the matches to give wrestlers a better idea when they would wrestle next. The use of three mats instead of two also helped speed things along considerably. Medals for first and second places were also awarded for the first time. Stan Wulf '65 and his squad of varsity wrestlers as referees did a very fine job of running the tournament.

Final team standings:

1. Beta Theta Pi A	57
2. Burton A	35
3. Phi Delta Theta A	33
4. Lambda Chi Alpha A	27
5. Sigma Phi Epsilon	25
6. (Tie) East Campus A	25
7. Burton B	24
8. Alpha Tau Omega A	20
9. Delta Upsilon	18
10. Zeta Beta Tau A	16
11. Burton C	13
(Tie) Independent	13
Sigma Alpha Epsilon	13

On Deck

Today, Wednesday, November 4
Soccer (F)—Phillips Exeter, Away,
3:00 pm

Thursday, November 5
Soccer (V)—Connecticut, Home,
3:00 pm

Saturday, November 7
Sailing (V)—Schell Trophy at MIT
(thru Sunday)

Monday, November 9
Cross country (V)—New England
at Franklin Park
Cross country (F)—New England
at Franklin Park

Sports Spot

Tech fall season strong

With most of the fall sports coming to a close in a week or two, it looks like the Tech sports fan can look back on a really fine fall. The teams' combined records stand at 23-12-1 with only three events left, giving them a .653 percentage, quite a record.

The sailing team continues to be the headliners, although they lost their first trophy competition of the entire fall season last weekend with a second in the White Trophy at Coast Guard. This leaves them 5-1 in trophy racing, with the Schell and Staake Trophies yet to go. Even at this distant time, the squad looks like strong favorites in the Nationals next summer.

The varsity cross-country squad is having their best season ever so far this year, though only a few observers are genuinely surprised. With all five top runners returning from last year's team, which was hailed as one of the best ever, the fall running looked bright. The team lived up to their promise, finishing the dual meet season 6-3, losing only to the top small-colleges in New England. They also finished the best ever done by MIT in the Easterns with a 2nd place behind Providence.

The team's number one man, Sumner Brown '66, has also done all expected of him so far after having overcome an early-season injury. His only dual-meet loss was to his constant nemesis Dave Dunsky of Northeastern, and he added a couple more course records to his list. He improved his place in the Easterns from 10th

to 3rd and is now looking forward to improving on last year's 19th in the small-college Nationals.

The varsity soccer team has been somewhat disappointing so far and will have to hustle against Connecticut tomorrow to pull their season record up to the .500 mark. Eight returning starters pointed toward a promising season, but the loss of All-Star Bob Mehrabian to graduation proved to be a bigger blow than had been estimated.

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